

**2023-2024**

**This booklet contains tests for**

Art (grades 4-6)  
Calculator Applications (grades 6-8)  
Chess Puzzle (grades 2-8)  
Creative Writing (grade 2)  
Dictionary Skills (grades 5-6)  
Listening Skills (grades 5-6)  
Maps, Graphs & Charts (grades 5-6)  
Mathematics (grades 6-8)  
Number Sense (grades 4-6)  
Ready Writing (grades 3-6)  
Science (now grades 6-8)  
Social Studies (grades 5-6)  
Storytelling (grades 2-3)

**Duplicate materials as needed.  
For contest rules, refer to the  
A+ Handbook or UIL website.**

**ELEMENTARY ACADEMIC  
STUDY MATERIALS BOOKLET**

[www.uiltexas.org/aplus](http://www.uiltexas.org/aplus)



UNIVERSITY INTERSCHOLASTIC LEAGUE



**FOR GRADER USE ONLY**

Score Test Below:

\_\_\_\_\_ out of 60. Initials \_\_\_\_\_

\_\_\_\_\_ out of 60. Initials \_\_\_\_\_

**Papers contending to place:**

\_\_\_\_\_ out of 60. Initials \_\_\_\_\_

*\*To calculate final score, add Part A and Part B together.*



**University Interscholastic League  
A+ Art Contest Part B • Answer Sheet**

*Write your contestant number in the upper right corner, and circle your grade below.*

**Circle Grade Level:**

**4      5      6      7      8**

Art Elements & Principles

Art History

- 1.    A    B    C    D
- 2.    A    B    C    D
- 3.    A    B    C    D
- 4.    A    B    C    D
- 5.    A    B    C    D
- 6.    A    B    C    D
- 7.    A    B    C    D
- 8.    A    B    C    D
- 9.    A    B    C    D
- 10.   A    B    C    D
- 11.   True    False
- 12.   True    False
- 13.   True    False
- 14.   True    False
- 15.   True    False

- 16.   A    B    C    D
- 17.   A    B    C    D
- 18.   A    B    C    D
- 19.   A    B    C    D
- 20.   A    B    C    D
- 21.   A    B    C    D
- 22.   A    B    C    D
- 23.   A    B    C    D
- 24.   A    B    C    D
- 25.   A    B    C    D
- 26.   True    False
- 27.   True    False
- 28.   True    False
- 29.   True    False
- 30.   True    False

## Art Practice Test- Grades 4-6

### Art Elements and Principles Section

1. Blue and Yellow combine to make what color?
  - a) Brown
  - b) Pink
  - c) Purple
  - d) Green
  
2. How many primary colors are there?
  - a) 2
  - b) 3
  - c) 6
  - d) 12
  
3. Paintings of single formally posed people are called what?
  - a) Landscape paintings
  - b) Portraits
  - c) Genre scenes
  - d) Still lifes
  
4. What is the focal point of a work of art?
  - a) The center of the piece
  - b) The part of the piece that commands the viewer's attention
  - c) The foreground
  - d) The most colorful part of the piece
  
5. The way individual art elements work together to form a complete painting is called
  - a) Form
  - b) Composition
  - c) Perspective
  - d) Contrast



6. Which of these is an example of a painting subject?
- a) Genre painting
  - b) Still life
  - c) Portrait
  - d) All of the above
7. What technique uses high contrast between light and shadow to create a dramatic effect?
- a) Silk screening
  - b) Tempera
  - c) Chiaroscuro
  - d) Abstraction
8. What effect are jagged or zigzagged lines most likely to have in painting?
- a) A sense of fluid and graceful movement
  - b) A sense of danger and instability
  - c) A sense of height and grandeur
  - d) A sense of rigidity and stiffness
9. Which of the following is INCORRECT? Artists often use color to
- a) create contrast in an image
  - b) create mood
  - c) create harmony
  - d) create perspective
10. An artist's complete body of work is called their
- a) subject
  - b) palette
  - c) oeuvre
  - d) Style

**True/False**

11. Red is a cool color.



20. *Noah Leading the Animals into the Arc* is an example of
- a) an oil sketch
  - b) a religious painting
  - c) a baroque painting
  - d) All of the above
21. What did Monet intend *Weeping Willow* to be?
- a) A celebration of life
  - b) An exercise in light and color
  - c) A response to the tragedies of World War One
  - d) An optimistic painting for rural Americans
22. What was the birthplace of the Renaissance?
- a) Madrid
  - b) Florence
  - c) Amsterdam
  - d) Paris
23. What subject is Alice Neel famous for?
- a) Portraits
  - b) Landscapes
  - c) Abstract
  - d) Genre
24. What medium did Garofalo use to create *Madonna and Child with St. Jerome*?
- a) Watercolors
  - b) Tempera
  - c) Oil paint
  - d) Colored pencils
25. In what period was Henri Matisse creating art?
- a) Renaissance
  - b) Baroque
  - c) Modern
  - d) Contemporary

**True/False**

26. During the Renaissance period, most artists were employed by the Catholic Church.

27. Most art produced during the Dutch Golden Age were large elaborate religious paintings.

28. Regionalism depicted rural America during the early 20th Century.

29. Caravaggio was able to create so many paintings because he lived a long and peaceful life in Northern Italy.

30. *Banquet Still Life with Roses* by van Beyeren is an example of impressionism.

## Art Practice Test- Grades 4-6

### Key

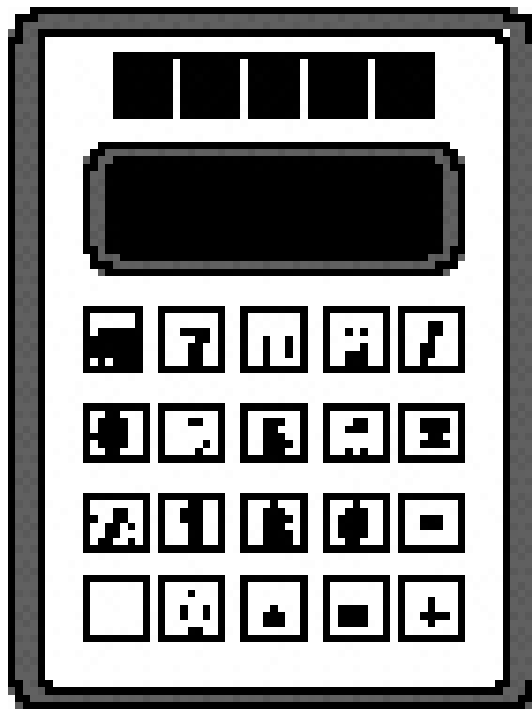
1. D
2. B
3. B
4. B
5. B
6. D
7. C
8. B
9. D
10. C
11. B
12. A
13. A
14. A
15. B
16. C
17. B
18. A
19. D
20. D
21. C
22. B
23. A
24. C
25. C
26. A
27. B
28. A
29. B
30. B

**INVITATIONAL 2022-2023**

**A+ ACADEMICS**



University Interscholastic League



# Calculator Applications

**DO NOT OPEN TEST  
UNTIL TOLD TO DO SO**

## 2022 – 2023 UIL MS Calculator Test A

23X-1.  $8460 - 7910$  ----- 1= \_\_\_\_\_

23X-2.  $29 - 40 - 36$  ----- 2= \_\_\_\_\_

23X-3.  $1740 + 680 + 1080$  ----- 3= \_\_\_\_\_

23X-4.  $\pi - 9 - 12 - 14$  ----- 4= \_\_\_\_\_

23X-5.  $239 - 33 - 224 - 100$  ----- 5= \_\_\_\_\_

23X-6.  $98 + 146 - 326 - 267 - 414$  ----- 6= \_\_\_\_\_

23X-7.  $(\pi + 1.17 - 1.59) - (1.45 + 0.641)$  ----- 7= \_\_\_\_\_

23X-8.  $(0.36 - 0.69) + (0.273 - 1.13 - 0.409)$  ----- 8= \_\_\_\_\_

23X-9.  $412 \times 563 \times 70$  ----- 9= \_\_\_\_\_

23X-10.  $9820 \times 249 \times 4190 \times 213$  ----- 10= \_\_\_\_\_

23X-11. What is the product of 82.8 and -562? ----- 11= \_\_\_\_\_

23X-12. Shayna ran 3.75 miles each day during cross-country season for 11 weeks. How many total miles did she run? ----- 12= \_\_\_\_\_ mi

23X-13. The grapes, that I like to eat, were selling for a price of \$1.68 per pound. If the scale that weighs the grapes states that I have bought 3.75 pounds of grapes, how much did I pay for the grapes? ----- 13=\$ \_\_\_\_\_

23X-14.  $(249)[233 \times 183/152]$  ----- 14= \_\_\_\_\_

23X-15.  $(-34)[142 \times 176 \times 171]$  ----- 15= \_\_\_\_\_

23X-16.  $\left[\frac{275}{274}\right] [(52/243) + 0.176]$  ----- 16= \_\_\_\_\_

23X-17.  $\{(108)(154 - 21)(145)\} - 8.71 \times 10^5$  ----- 17= \_\_\_\_\_

23X-18.  $\frac{[179/(266)]/0.945}{(18.7 \times 29.1)(7.32)}$  ----- 18= \_\_\_\_\_

23X-19.  $\left[\frac{(0.00189 + 7.18 \times 10^{-4})}{40/54}\right] \left[\frac{179}{8.85}\right]$  ----- 19= \_\_\_\_\_

23X-20.  $(88.3)[373/412 \times 301/382] - 62.9$  ----- 20= \_\_\_\_\_

23X-21.  $\frac{(\pi)(17/5)(14/5)}{130}$  ----- 21= \_\_\_\_\_

23X-22.  $\frac{(761 + 131 - 232)}{\{(0.202 - 0.204)/(13)\}}$  ----- 22= \_\_\_\_\_

23X-23.  $\frac{[-(780 + 990)(559 - 911)]}{(2.48 \times 10^{-4}/(0.115))}$  ----- 23= \_\_\_\_\_

23X-24. If the driving distance from Amarillo to Lubbock is 123.6 miles and Jack wants to travel that distance in 2 hours, what must his average speed be to accomplish this feat?----- 24= \_\_\_\_\_ mph

23X-25. If the current US postal rate for first class mail letter is 60¢ for the first ounce and 24¢ for each additional ounce, how many first class letters can I mail for \$25, if they each weigh 2 ounces? ----- 25= \_\_\_\_\_ (integer)

23X-26. During the summer of 2022, the high temperatures at my farm for one week in July were: 101°F, 103°F, 103°F, 108°F, 102°F, 104°F, and 101°F. What was the mean temperature for that week in July? ----- 26= \_\_\_\_\_ °F



23X-27.  $\frac{(8.10 \times 10^{12}) + (2.23 \times 10^{12})}{(-56.5)(26) - 410}$  ----- 27= \_\_\_\_\_

23X-28.  $(0.00737)[(0.572/0.552)(218 + 338)]$  ----- 28= \_\_\_\_\_

23X-29.  $\frac{(0.0416 + 0.0546)(0.402 + 0.8)}{(1.76 \times 10^{12})}$  ----- 29= \_\_\_\_\_

23X-30.  $\frac{1}{-0.0309} + \frac{1}{(\pi)(0.0734 - 0.0843)}$  ----- 30= \_\_\_\_\_

23X-31.  $(50.6)\left[\frac{1.66}{(3.74 \times 10^{11})}\right]$  ----- 31= \_\_\_\_\_

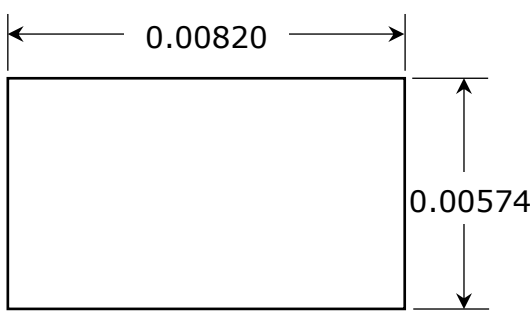
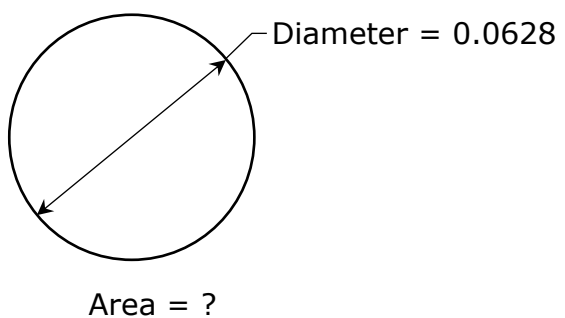
23X-32.  $(7.21)[(4.41 \times 10^{-9}) - (1.45 \times 10^{-9})]$  ----- 32= \_\_\_\_\_

23X-33.  $1/(0.128 - 0.0844) - 1/(0.0404)$  ----- 33= \_\_\_\_\_

23X-34.  $\frac{1}{293} - \frac{1}{(363 + 429)}$  ----- 34= \_\_\_\_\_

23X-35. What is the maximum volume of air in an empty room that has 10' tall walls, a flat floor and ceiling, and measures 12' by 16' 8"?- 35= \_\_\_\_\_ ft<sup>3</sup>

23X-36. Each day at school Wesley eats breakfast and lunch. If each breakfast meal costs \$1.25 and each lunch meal costs \$2.35, how much total money does Wesley spend for eating meals on 20 days of school? 36=\$ \_\_\_\_\_

<p>23X-37.</p> <p style="text-align: center;">RECTANGLE</p>  <p style="text-align: center;">Perimeter = ?</p> <p>23X-37= _____</p>	<p>23X-38.</p> <p style="text-align: center;">CIRCLE</p>  <p style="text-align: center;">Area = ?</p> <p>23X-38= _____</p>
---	--

23X-39.  $(0.412 + 0.113 + 0.454)^2(915 + 1950)^2$  ----- 39= \_\_\_\_\_

23X-40.  $\frac{(38600 + 66500)^2}{(0.0278 - 0.0269)^3}$  ----- 40= \_\_\_\_\_

23X-41.  $\left[\frac{1590}{69.1}\right](89.9 + 57)^3$  ----- 41= \_\_\_\_\_

23X-42.  $(3450)\sqrt{1500 + 521 + 1840}$  ----- 42= \_\_\_\_\_

23X-43.  $(1/(0.00151))(2.20 \times 10^5 - 2.19 \times 10^5)^3$  ----- 43= \_\_\_\_\_

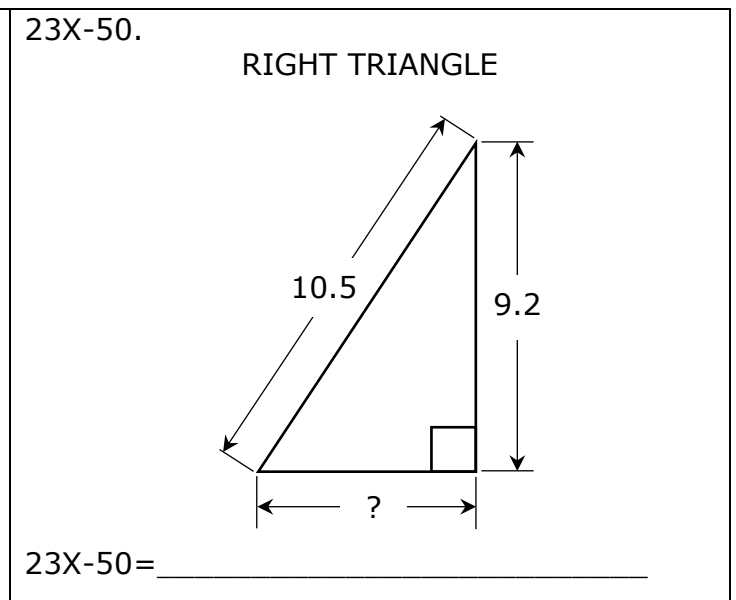
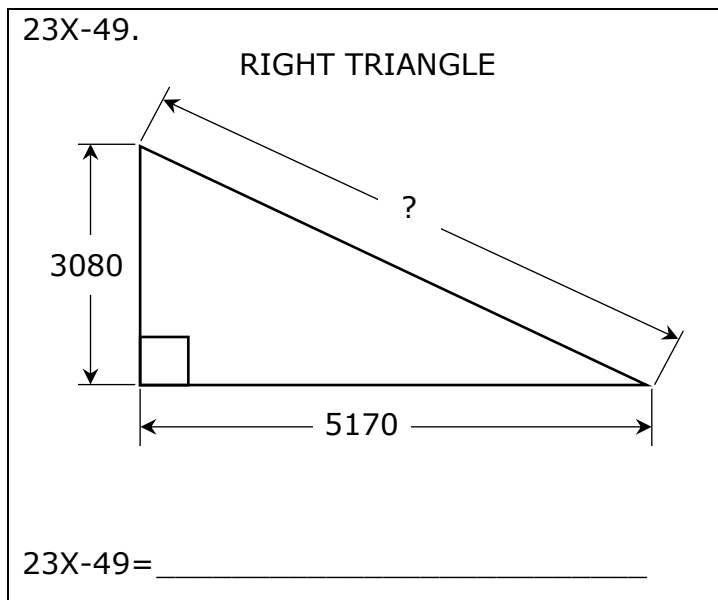
23X-44.  $(1/\pi)\sqrt{\frac{0.0616 + 0.0347}{0.0651 - 0.0214}}$  ----- 44= \_\_\_\_\_

23X-45.  $\left[3\sqrt{(275/526)(990)}\right]^4$  ----- 45= \_\_\_\_\_

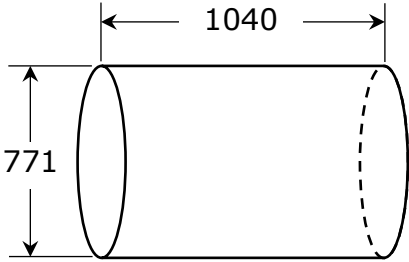
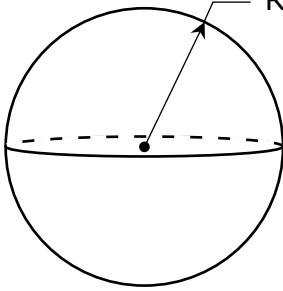
23X-46.  $(1210)\sqrt{41600 + 47800 - 7470}$  ----- 46= \_\_\_\_\_

23X-47. Genny walked south 37 meters and stopped. She then walked 70.3 meters west and stopped. What is the shortest distance back to where she started walking? ----- 47= \_\_\_\_\_ m

23X-48. Andy took a thin coffee stirrer stick that measured 6" in length and placed it in his empty coffee cup so that it touched the opposite edge of the bottom of the coffee cup. If the other end of the stirrer stick just barely touched the top rim of the coffee cup, and the circular rim had a diameter of 3.5", how deep was the coffee cup?----- 48= \_\_\_\_\_ in





<p>23X-61.</p> <p style="text-align: center;">RIGHT CYLINDER</p>  <p style="text-align: center;">Volume = ?</p> <p>23X-61= _____</p>	<p>23X-62.</p> <p style="text-align: center;">SPHERE</p>  <p style="text-align: center;">Surface Area = 1000</p> <p>23X-62= _____</p>
---	--

23X-63.  $\frac{26!/22!}{9! + 7!}$  ----- 63= \_\_\_\_\_

23X-64. (deg)  $(9.3 - 42)\sin(20.8^\circ)$  ----- 64= \_\_\_\_\_

23X-65.  $(205 - \pi)e^{0.662}$  ----- 65= \_\_\_\_\_

23X-66. (rad)  $\frac{\cos(76.3)}{4810/548}$  ----- 66= \_\_\_\_\_

23X-67. (deg)  $[192]\tan(479^\circ - 292^\circ)$  ----- 67= \_\_\_\_\_

23X-68. (deg)  $\frac{\sin(13.9^\circ)}{2.13 + 0.532}$  ----- 68= \_\_\_\_\_

23X-69. (rad)  $\cos[(34.8 - 43.2)(37)]$  ----- 69= \_\_\_\_\_

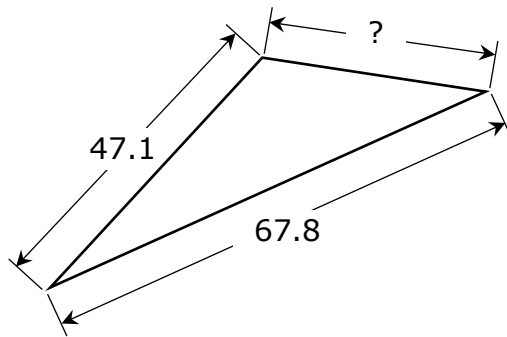
23X-70.  $(411 - 356 + 500)^{2/3}$  ----- 70= \_\_\_\_\_

23X-71. The sales tax at a particular store is 6¼%. If I bought taxable items that cost \$15.89, \$29.79, and \$39.99, how much do I get back if I pay with a \$100 bill?----- 71=\$\_\_\_\_\_

23X-72. If a number is squared, then multiplied by two and added to nineteen times that same number, the result is 100. What is that number if it is a positive number?----- 72= \_\_\_\_\_

23X-73.

SCALENE TRIANGLE

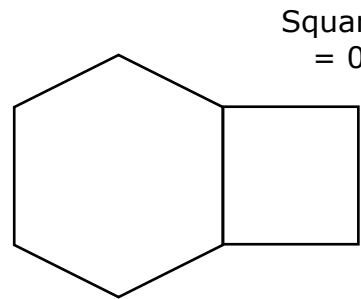


Semiperimeter = 75

23X-73= \_\_\_\_\_

23X-74.

REGULAR HEXAGON AND SQUARE



Square Area = 0.782

Perimeter = ?

23X-74= \_\_\_\_\_

23X-75.  $\frac{\text{Log}(35.8 + 13.8)}{22.9 - 81.6}$  ----- 75= \_\_\_\_\_

23X-76.  $\frac{(22.6)^{0.876}(1.85)^{0.662}}{(2.77 - 2.37)^{-10}}$  ----- 76= \_\_\_\_\_

23X-77.  $\frac{30700 - 14700}{\text{Log}(1340 + 1610)}$  ----- 77= \_\_\_\_\_

23X-78.  $\frac{\text{Log}[4.81 \times 10^6 + (2580)(3760)]}{0.657 + \text{Log}[3.68 + 3.73]}$  ----- 78= \_\_\_\_\_

23X-79.  $1 + 2 + 3 + \dots + 939$  ----- 79= \_\_\_\_\_

23X-80.  $1 + 0.55 + (0.55)^2 + \frac{(0.55)^4}{8} - \frac{(0.55)^5}{15}$  ----- 80= \_\_\_\_\_

## 2022 – 2023 UIL MS Calculator Test A Answer Key

23X-1	= 550 = $5.50 \times 10^2$	23X-14	= 69800 = $6.98 \times 10^4$	23X-27	= $-5.50 \times 10^9$
23X-2	= -47.0 = $-4.70 \times 10^1$	23X-15	= $-1.45 \times 10^8$	23X-28	= 4.25 = $4.25 \times 10^0$
23X-3	= 3500 = $3.50 \times 10^3$	23X-16	= 0.391 = $3.91 \times 10^{-1}$	23X-29	= $6.57 \times 10^{-14}$
23X-4	= -31.9 = $-3.19 \times 10^1$	23X-17	= $1.21 \times 10^6$	23X-30	= -61.6 = $-6.16 \times 10^1$
23X-5	= -118 = $-1.18 \times 10^2$	23X-18	= 0.000179 = $1.79 \times 10^{-4}$	23X-31	= $2.25 \times 10^{-10}$
23X-6	= -763 = $-7.63 \times 10^2$	23X-19	= 0.0712 = $7.12 \times 10^{-2}$	23X-32	= $2.13 \times 10^{-8}$
23X-7	= 0.631 = $6.31 \times 10^{-1}$	23X-20	= 0.0906 = $9.06 \times 10^{-2}$	23X-33	= -1.82 = $-1.82 \times 10^0$
23X-8	= -1.60 = $-1.60 \times 10^0$	23X-21	= 0.230 = $2.30 \times 10^{-1}$	23X-34	= 0.00215 = $2.15 \times 10^{-3}$
23X-9	= $1.62 \times 10^7$	23X-22	= $-4.29 \times 10^6$	23X-35	= 2000 = $2.00 \times 10^3$
23X-10	= $2.18 \times 10^{12}$	23X-23	= $2.89 \times 10^8$	23X-36	= 72.00 Dollar Answer
23X-11	= -46500 = $-4.65 \times 10^4$	23X-24	= 61.8 = $6.18 \times 10^1$	23X-37	= 0.0279 = $2.79 \times 10^{-2}$
23X-12	= 289 = $2.89 \times 10^2$	23X-25	= 29 Integer Answer	23X-38	= 0.00310 = $3.10 \times 10^{-3}$
23X-13	= 6.30 Dollar Answer	23X-26	= 103 = $1.03 \times 10^2$		

## 2022 – 2023 UIL MS Calculator Test A Answer Key

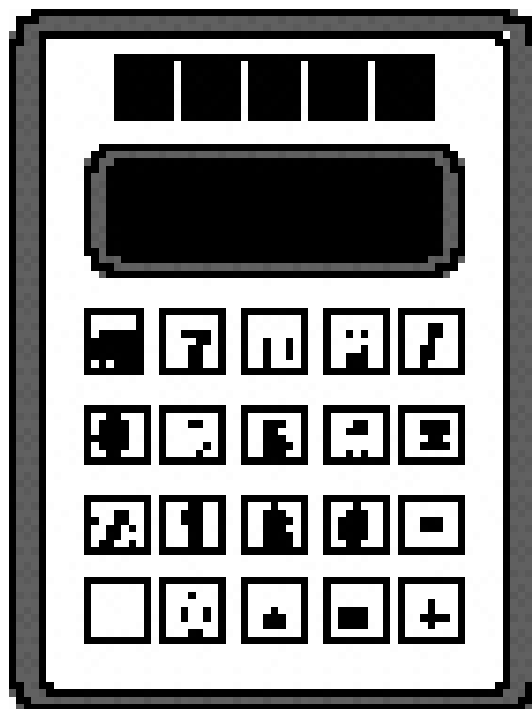
23X-39 = $7.87 \times 10^6$	23X-51 = 3590 = $3.59 \times 10^3$	23X-61 = $4.86 \times 10^8$	23X-73 = 35.1 = $3.51 \times 10^1$
23X-40 = $1.52 \times 10^{19}$	23X-52 = $2.76 \times 10^{-7}$	23X-62 = 8.92 = $8.92 \times 10^0$	23X-74 = 7.07 = $7.07 \times 10^0$
23X-41 = $7.29 \times 10^7$	23X-53 = -6.28 = $-6.28 \times 10^0$	23X-63 = 0.975 = $9.75 \times 10^{-1}$	23X-75 = -0.0289 = $-2.89 \times 10^{-2}$
23X-42 = 214000 = $2.14 \times 10^5$	23X-54 = 0.0671 = $6.71 \times 10^{-2}$	23X-64 = -11.6 = $-1.16 \times 10^1$	23X-76 = 0.00242 = $2.42 \times 10^{-3}$
23X-43 = $6.62 \times 10^{11}$	23X-55 = 0.885 = $8.85 \times 10^{-1}$	23X-65 = 391 = $3.91 \times 10^2$	23X-77 = 4610 = $4.61 \times 10^3$
23X-44 = 0.473 = $4.73 \times 10^{-1}$	23X-56 = -141 = $-1.41 \times 10^2$	23X-66 = 0.0707 = $7.07 \times 10^{-2}$	23X-78 = 4.69 = $4.69 \times 10^0$
23X-45 = 4160 = $4.16 \times 10^3$	23X-57 = 9.66 = $9.66 \times 10^0$	23X-67 = 23.6 = $2.36 \times 10^1$	23X-79 = 441000 = $4.41 \times 10^5$
23X-46 = 346000 = $3.46 \times 10^5$	23X-58 = 8.16 = $8.16 \times 10^0$	23X-68 = 0.0902 = $9.02 \times 10^{-2}$	23X-80 = 1.86 = $1.86 \times 10^0$
23X-47 = 79.4 = $7.94 \times 10^1$	23X-59 = 3440 = $3.44 \times 10^3$	23X-69 = -0.976 = $-9.76 \times 10^{-1}$	
23X-48 = 4.87 = $4.87 \times 10^0$	23X-60 = 162 = $1.62 \times 10^2$	23X-70 = 67.5 = $6.75 \times 10^1$	
23X-49 = 6020 = $6.02 \times 10^3$		23X-71 = 8.98 Dollar Answer	
23X-50 = 5.06 = $5.06 \times 10^0$		23X-72 = 3.77 = $3.77 \times 10^0$	

**FALL/WINTER DISTRICT 2022-2023**

**A+ ACADEMICS**



University Interscholastic League



# Calculator Applications

**DO NOT OPEN TEST  
UNTIL TOLD TO DO SO**



## 2022 – 2023 UIL MS Calculator Test B

23Y-1.  $5910 - 3870$  ----- 1= \_\_\_\_\_

23Y-2.  $-53 - 49 + 10$  ----- 2= \_\_\_\_\_

23Y-3.  $52.7 + 28.6 + 13.1$  ----- 3= \_\_\_\_\_

23Y-4.  $18 - 18 - \pi - 16$  ----- 4= \_\_\_\_\_

23Y-5.  $1250 - 1030 - 1060 + 592$  ----- 5= \_\_\_\_\_

23Y-6.  $400 + 400 - 336 - 264 + 275$  ----- 6= \_\_\_\_\_

23Y-7.  $3.94 + 6.23 + 6.42 + 1.97 + 1.29$  ----- 7= \_\_\_\_\_

23Y-8.  $1.4 + 0.454 - 0.673 + 1.45 + 1.41$  ----- 8= \_\_\_\_\_

23Y-9.  $180 \times 131 \times 359$  ----- 9= \_\_\_\_\_

23Y-10.  $1150 \times 1920 \times 179 \times 4070$  ----- 10= \_\_\_\_\_

23Y-11. What is the result of adding pi and 4.81 and then multiplying that sum by -0.00506? ----- 11= \_\_\_\_\_

23Y-12. If I get reimbursed 59¢ per mile for traveling to a presentation workshop I give, how much am I reimbursed for traveling to a workshop that is a total of 739.7 miles? ----- 12=\$ \_\_\_\_\_

23Y-13. How much fuel do I use in driving 515 miles if my car can travel 23 miles per gallon of fuel? ----- 13= \_\_\_\_\_ gal

23Y-14.  $(748)[490 \times 747/128]$  ----- 14= \_\_\_\_\_

23Y-15.  $40/[37 \times 40 \times 132]$  ----- 15= \_\_\_\_\_

23Y-16.  $\{(600)(407 - 317)(446)\} - 2.28 \times 10^7$  ----- 16= \_\_\_\_\_

23Y-17.  $(110 + 62)[154 - 156 - 129]$  ----- 17= \_\_\_\_\_

23Y-18.  $\frac{(294/368) + (400/400)}{(0.0242 - 0.0189)}$  ----- 18= \_\_\_\_\_

23Y-19.  $\left[ \frac{(0.0156 + 0.0102)}{137/141} \right] \left[ \frac{13.2}{3.6} \right]$  ----- 19= \_\_\_\_\_

23Y-20.  $\frac{(\pi)(11/6)(15/13)}{131}$  ----- 20= \_\_\_\_\_

23Y-21.  $\frac{(0.00217)(400)}{0.011} (17.4 - 4.87)$  ----- 21= \_\_\_\_\_

23Y-22.  $\frac{[-(1780 + 1350)(2030 - 968)]}{(169/(1.11 \times 10^5))}$  ----- 22= \_\_\_\_\_

23Y-23.  $\frac{(\pi)(189/352)(543/314)}{(182/227)}$  ----- 23= \_\_\_\_\_

23Y-24. To help with the family expenses Mike works as a busboy at a local restaurant for 3 hours per night, Tuesday through Sunday. If he was paid \$5.75 per hour and earned on average \$22 per night in tips, what was his total weekly earnings? ----- 24=\$ \_\_\_\_\_

23Y-25. Lady and Max, our two dogs, each consume 2.25 pounds of dog food each day. How much dog food do they eat together during the months of September, October, and November? ----- 25= \_\_\_\_\_ Lbs.

23Y-26. Li and John are at opposite ends of the goal lines of a football field. At the same time, they start walking toward each other. If John walks at a steady rate of 5 feet/second and Li walks at a steady rate of 6 feet/second, what is the shortest time it takes them to reach each other, assuming they both walk in a straight line?----- 26= \_\_\_\_\_ s

23Y-27.  $(6.42 \times 10^{-4}) [(0.548/0.506)(\pi/0.34)]$  ----- 27= \_\_\_\_\_

23Y-28.  $\frac{(11 + 16.1)(0.0711 + 0.0356)}{(3.50 \times 10^{12})}$  ----- 28= \_\_\_\_\_

23Y-29.  $[5880 - (6220 + 5090)] + [(29.2)(1780 - 1890)]$  ----- 29= \_\_\_\_\_

23Y-30.  $\frac{1}{0.807} + \frac{1}{(0.48 - 0.173)}$  ----- 30= \_\_\_\_\_

23Y-31.  $[0.00942] \left[ \frac{1/9.24 \times 10^{-4}}{1/0.0052} \right]$  ----- 31= \_\_\_\_\_

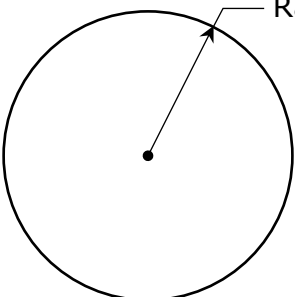
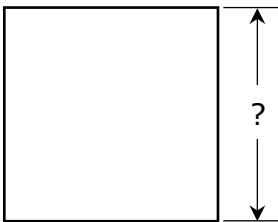
23Y-32.  $\frac{1}{31.6} + \frac{1}{(\pi)(209 - 162)}$  ----- 32= \_\_\_\_\_

23Y-33.  $\frac{1}{283} - \frac{1}{730} + \frac{1}{769}$  ----- 33= \_\_\_\_\_

23Y-34.  $\left[ \frac{1/542}{1/480} \right] + [0.597]$  ----- 34= \_\_\_\_\_

23Y-35. If a quarter is 1.75 millimeters thick, what is the greatest number of quarters that can be stacked one foot high? (Remember 1 inch = 2.54 centimeters)----- 35= \_\_\_\_\_ (integer)

23Y-36. The average daily amount of rainfall for the month of March in Houston is 3.86". If it rained 2.95" on March 10<sup>th</sup>, 4.76" on March 19<sup>th</sup> and 3.75" on March 25<sup>th</sup>, how much does it need to rain on the last day of March to reach that average daily rainfall amount for the month?----- 36= \_\_\_\_\_ in

<p>23Y-37. <span style="margin-left: 100px;">CIRCLE</span></p> <div style="text-align: center;">  </div> <p style="text-align: center;">Circumference = ?</p> <p>23Y-37= _____</p>	<p>23Y-38. <span style="margin-left: 100px;">SQUARE</span></p> <div style="text-align: center;">  </div> <p style="text-align: center;">Perimeter = <math>8.29 \times 10^{12}</math></p> <p>23Y-38= _____</p>
---	--

23Y-39.  $\left[\frac{71.8}{0.744}\right](54.5 + 82.3)^3$  ----- 39= \_\_\_\_\_

23Y-40.  $\frac{(2970 + 4330)^2}{(0.251 - 0.126)^3}$  ----- 40= \_\_\_\_\_

23Y-41.  $\left[\frac{45900 + (1/(1.80 \times 10^{-5}))}{(58900/48200) - 0.702}\right]^2$  ----- 41= \_\_\_\_\_

23Y-42.  $(1/(0.0313))(6160 - 3450)^2$  ----- 42= \_\_\_\_\_

23Y-43.  $\sqrt{8.17} + \sqrt{46 + 32.4} - (\pi)\sqrt{30.8}$  ----- 43= \_\_\_\_\_

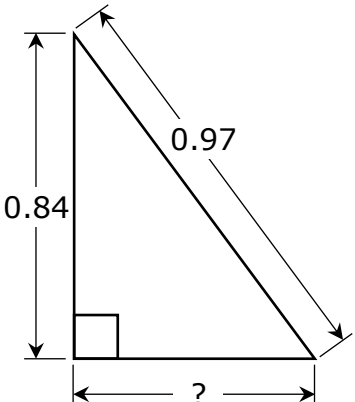
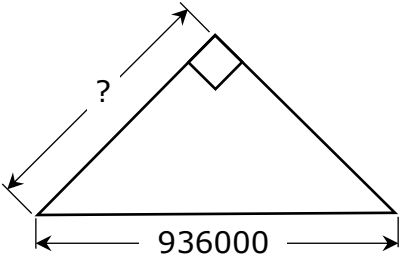
23Y-44.  $(1/\pi)\sqrt[4]{\frac{0.0186 + 0.0402}{0.146 - 0.142}}$  ----- 44= \_\_\_\_\_

23Y-45.  $\frac{1}{\sqrt{91.3 + 74.4 + 112}} + \left(\frac{1}{\sqrt{2.44}}\right)^4$  ----- 45= \_\_\_\_\_

23Y-46.  $(5370)\sqrt{8360 + 10600 - 7120}$  ----- 46= \_\_\_\_\_

23Y-47. Liz tied a 25' long rope to the top of an 18'6" tall wall. What is the maximum distance she can stretch the rope taut and touch the level ground near the wall with the rope? ----- 47= \_\_\_\_\_ ft

23Y-48. The hands of a watch measured 6.35 mm and 9.75 mm. At 9:00 o'clock, what is the distance between the tips of the hands?----- 48= \_\_\_\_\_ mm

<p>23Y-49. <b>RIGHT TRIANGLE</b></p>  <p>23Y-49= _____</p>	<p>23Y-50. <b>ISOSCELES RIGHT TRIANGLE</b></p>  <p>23Y-50= _____</p>
---	--

$$23Y-51. \frac{(687 + 3910 - 4450)^2}{\sqrt{0.0709 + 0.0453 + 0.0752}} \text{ ----- } 51 = \underline{\hspace{2cm}}$$

$$23Y-52. \sqrt{\frac{0.395}{(0.0281)(419)}} + \frac{(0.0179 - 0.00918)}{(0.011 + 0.00998)} \text{ ----- } 52 = \underline{\hspace{2cm}}$$

$$23Y-53. \left[ \frac{\sqrt{\sqrt{322 - 241}}}{-(1870 - 350)} \right]^3 [59000 + 27100] \text{ ----- } 53 = \underline{\hspace{2cm}}$$

$$23Y-54. 7080 + \sqrt{(12800)(14300)} - (14300 + 13300) \text{ ----- } 54 = \underline{\hspace{2cm}}$$

$$23Y-55. 0.942 + \sqrt{(343)/(60.2)} - (0.581 + 0.959)^2 \text{ ----- } 55 = \underline{\hspace{2cm}}$$

$$23Y-56. \sqrt{\frac{(4.42 \times 10^5)(18600)}{(25400)(21000)}} - 0.41 + 1.89 \text{ ----- } 56 = \underline{\hspace{2cm}}$$

$$23Y-57. \sqrt{\frac{(1420)(11.8)}{(451) + (325)}} + 1/(2.16)^{-2} \text{ ----- } 57 = \underline{\hspace{2cm}}$$

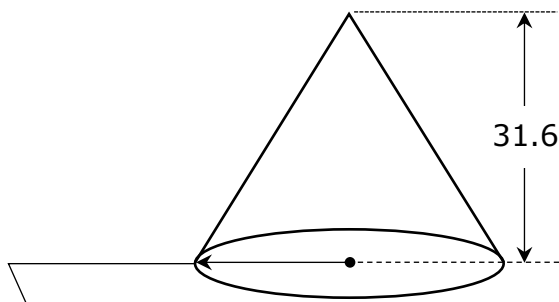
$$23Y-58. \sqrt{\frac{(966)(2100)}{(7.37) + (12.9)}} - 400 \text{ ----- } 58 = \underline{\hspace{2cm}}$$

23Y-59. On a particular day, the money exchange rate for the Mexican Peso to the US Dollar was 20.4341 Pesos to 1 US Dollar, while the Norwegian Kroner (kr) to Mexican Peso rate was 2.01969 Mexican Pesos to 1 Norwegian Kroner. If Mrs. Silva converted \$1000 to Pesos and converted her Pesos in Oslo, Norway to Kroner, how many Kroner did she get to spend in Norway for Christmas gifts while on a cruise?----- 59=\_\_\_\_\_ kr

23Y-60. To calculate the distance a dropped object falls, in feet, you simply multiply one-half times the acceleration due to gravity times the length of time squared the object is in the air. So, if the acceleration due to gravity is 32.174 ft/sec<sup>2</sup> and the object falls 6 feet, how long did the object take to fall that distance?----- 60=\_\_\_\_\_ s

23Y-61.

RIGHT CIRCULAR CONE



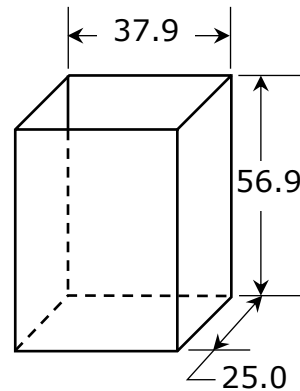
Radius = 18.3

Volume = ?

23Y-61= \_\_\_\_\_

23Y-62.

SOLID RECTANGULAR BOX



Total Surface Area = ?

23Y-62= \_\_\_\_\_

23Y-63.  $\frac{23! - 22!}{6!}$  ----- 63= \_\_\_\_\_

23Y-64. (deg)  $(1.87 + 0.27)\sin(107^\circ)$  ----- 64= \_\_\_\_\_

23Y-65.  $(8.68 \times 10^7 - 5.81 \times 10^7)^4(9530)$  ----- 65= \_\_\_\_\_

23Y-66. (deg)  $[107]\cos(111^\circ - 25.7^\circ)$  ----- 66= \_\_\_\_\_

23Y-67. (rad)  $\cos\left[\frac{(2.47)(\pi)}{(30.8)(37.8)}\right]$  ----- 67= \_\_\_\_\_

23Y-68. (deg)  $\frac{\tan(13.9^\circ)}{2760 + 3010}$  ----- 68= \_\_\_\_\_

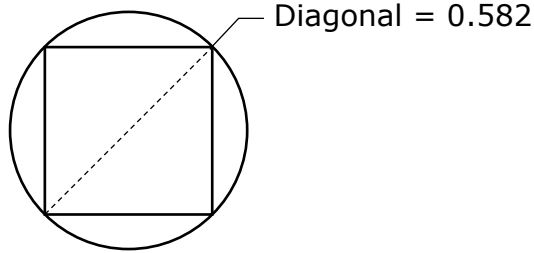
23Y-69. (rad)  $(14.2)\cos(223)$  ----- 69= \_\_\_\_\_

23Y-70.  $(37.8 - 21.8)e^{\pi - 0.372}$  ----- 70= \_\_\_\_\_

23Y-71. What is the percent increase for something that used to cost 25¢ but now costs 37¢? ----- 71= \_\_\_\_\_ %

23Y-72. If a number squared minus one and a half times that same number is 2.5, what is that number if it is negative? ----- 72= \_\_\_\_\_

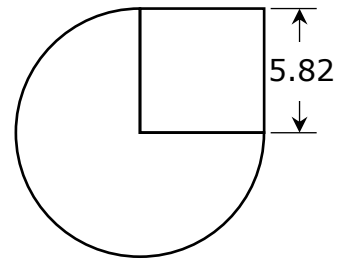
23Y-73.  
CIRCUMSCRIBED SQUARE AND CIRCLE



$$\frac{\text{Square Area}}{\text{Circle Area}} = ?$$

23Y-73= \_\_\_\_\_

23Y-74.  
THREE-QUARTERS CIRCLE AND SQUARE



$$\text{Total Area} = ?$$

23Y-74= \_\_\_\_\_

23Y-75.  $\frac{\text{Log}(4.90 \times 10^{10} + 5.09 \times 10^{10})}{1.32}$  ----- 75= \_\_\_\_\_

23Y-76.  $\frac{(0.241)^{0.648}(2.8)^{0.44}}{(0.576 - 0.386)^{-4}}$  ----- 76= \_\_\_\_\_

23Y-77.  $(8350)_{10}^{(0.981)(5.22)}$  ----- 77= \_\_\_\_\_

23Y-78.  $\frac{\text{Log}[491 + (46.6)(46.8)]}{0.872 + \text{Log}[6.31 + 5.17]}$  ----- 78= \_\_\_\_\_

23Y-79.  $1 + 2 + 3 + \dots + 667$  ----- 79= \_\_\_\_\_

23Y-80.  $1 + \frac{(0.54)^4}{2} - \frac{(0.54)^6}{6} + \frac{(0.54)^8}{24} - \frac{(0.54)^{10}}{120}$  ----- 80= \_\_\_\_\_

## 2022 – 2023 UIL MS Calculator Test B Answer Key

23Y-1	= 2040 = $2.04 \times 10^3$	23Y-14	= $2.14 \times 10^6$	23Y-27	= 0.00642 = $6.42 \times 10^{-3}$
23Y-2	= -92.0 = $-9.20 \times 10^1$	23Y-15	= 0.000205 = $2.05 \times 10^{-4}$	23Y-28	= $8.26 \times 10^{-13}$
23Y-3	= 94.4 = $9.44 \times 10^1$	23Y-16	= $1.28 \times 10^6$	23Y-29	= -8640 = $-8.64 \times 10^3$
23Y-4	= -19.1 = $-1.91 \times 10^1$	23Y-17	= -22500 = $-2.25 \times 10^4$	23Y-30	= 4.50 = $4.50 \times 10^0$
23Y-5	= -248 = $-2.48 \times 10^2$	23Y-18	= 339 = $3.39 \times 10^2$	23Y-31	= 0.0530 = $5.30 \times 10^{-2}$
23Y-6	= 475 = $4.75 \times 10^2$	23Y-19	= 0.0974 = $9.74 \times 10^{-2}$	23Y-32	= 0.0384 = $3.84 \times 10^{-2}$
23Y-7	= 19.9 = $1.99 \times 10^1$	23Y-20	= 0.0507 = $5.07 \times 10^{-2}$	23Y-33	= 0.00346 = $3.46 \times 10^{-3}$
23Y-8	= 4.04 = $4.04 \times 10^0$	23Y-21	= 989 = $9.89 \times 10^2$	23Y-34	= 1.48 = $1.48 \times 10^0$
23Y-9	= $8.47 \times 10^6$	23Y-22	= $-2.18 \times 10^9$	23Y-35	= 174 Integer Answer
23Y-10	= $1.61 \times 10^{12}$	23Y-23	= 3.64 = $3.64 \times 10^0$	23Y-36	= 3.98 = $3.98 \times 10^0$
23Y-11	= -0.0402 = $-4.02 \times 10^{-2}$	23Y-24	= 235.50 Dollar Answer	23Y-37	= 0.0241 = $2.41 \times 10^{-2}$
23Y-12	= 436.42 Dollar Answer	23Y-25	= 410 = $4.10 \times 10^2$	23Y-38	= $2.07 \times 10^{12}$
23Y-13	= 22.4 = $2.24 \times 10^1$	23Y-26	= 27.3 = $2.73 \times 10^1$		



## 2022 – 2023 UIL MS Calculator Test B Answer Key

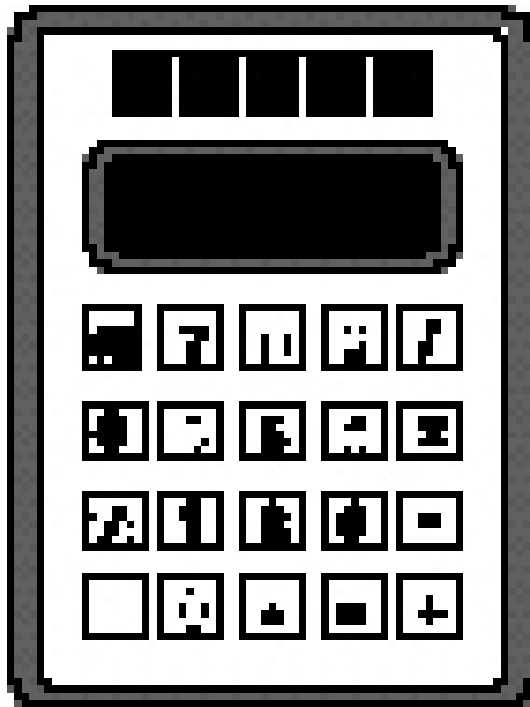
23Y-39 = $2.47 \times 10^8$	23Y-51 = 49400 = $4.94 \times 10^4$	23Y-61 = 11100 = $1.11 \times 10^4$	23Y-73 = 0.637 = $6.37 \times 10^{-1}$
23Y-40 = $2.73 \times 10^{10}$	23Y-52 = 0.599 = $5.99 \times 10^{-1}$	23Y-62 = 9050 = $9.05 \times 10^3$	23Y-74 = 114 = $1.14 \times 10^2$
23Y-41 = $3.81 \times 10^{10}$	23Y-53 = -0.000662 = $-6.62 \times 10^{-4}$	23Y-63 = $3.43 \times 10^{19}$	23Y-75 = 8.33 = $8.33 \times 10^0$
23Y-42 = $2.35 \times 10^8$	23Y-54 = -6990 = $-6.99 \times 10^3$	23Y-64 = 2.05 = $2.05 \times 10^0$	23Y-76 = 0.000815 = $8.15 \times 10^{-4}$
23Y-43 = -5.72 = $-5.72 \times 10^0$	23Y-55 = 0.957 = $9.57 \times 10^{-1}$	23Y-65 = $6.47 \times 10^{33}$	23Y-77 = $1.10 \times 10^9$
23Y-44 = 0.623 = $6.23 \times 10^{-1}$	23Y-56 = 5.41 = $5.41 \times 10^0$	23Y-66 = 8.77 = $8.77 \times 10^0$	23Y-78 = 1.77 = $1.77 \times 10^0$
23Y-45 = 0.228 = $2.28 \times 10^{-1}$	23Y-57 = 9.31 = $9.31 \times 10^0$	23Y-67 = 1.00 = $1.00 \times 10^0$	23Y-79 = 223000 = $2.23 \times 10^5$
23Y-46 = 584000 = $5.84 \times 10^5$	23Y-58 = -83.6 = $-8.36 \times 10^1$	23Y-68 = $4.29 \times 10^{-5}$	23Y-80 = 1.04 = $1.04 \times 10^0$
23Y-47 = 16.8 = $1.68 \times 10^1$	23Y-59 = 10100 = $1.01 \times 10^4$	23Y-69 = -14.2 = $-1.42 \times 10^1$	
23Y-48 = 11.6 = $1.16 \times 10^1$	23Y-60 = 0.611 = $6.11 \times 10^{-1}$	23Y-70 = 255 = $2.55 \times 10^2$	
23Y-49 = 0.485 = $4.85 \times 10^{-1}$		23Y-71 = 48.0 = $4.80 \times 10^1$	
23Y-50 = 662000 = $6.62 \times 10^5$		23Y-72 = -1.00 = $-1.00 \times 10^0$	

**SPRING DISTRICT 2022-2023**

**A+ ACADEMICS**



University Interscholastic League



# Calculator Applications

**DO NOT OPEN TEST  
UNTIL TOLD TO DO SO**

## How to Write the Answers

### A. For all problems except stated problems as noted below—write three significant digits.

#### 1. Examples (\* means correct but not recommended)

Correct: 12.3, 123, 123.\*, 1.23x10\*, 1.23x10<sup>0\*</sup>  
1.23x10<sup>1</sup>, 1.23x10<sup>01</sup>, .0190, 0.0190, 1.90x10<sup>-2</sup>

Incorrect: 12.30, 123.0, 1.23(10)<sup>2</sup>, 1.23·10<sup>2</sup>, 1.230x10<sup>2</sup>,  
1.23\*10<sup>2</sup>, 0.19, 1.9x10<sup>-2</sup>, 19.0x10<sup>-3</sup>, 1.90E-02,

*answers written in parentheses(), brackets[] or braces{} are incorrect*

2. Plus or minus one digit error in the third significant digit is permitted.

### B. For stated problems

1. Except for integer and dollar sign problems, answers to stated problems should be written with three significant digits.

2. Integer problems are indicated by (integer) in the answer blank. Integer problems answers must be exact, no plus or minus one digit, no decimal point or scientific notation.

3. Dollar sign (\$) problems should be answered to the exact cent, but plus or minus one cent error is permitted. Answers must be in fixed notation. The decimal point and cents are required for exact-dollar answers.

## 2022 – 2023 UIL MS Calculator Test C

23Z-1.  $719 - 1760$  ----- 1= \_\_\_\_\_

23Z-2.  $23 + 59 - 38$  ----- 2= \_\_\_\_\_

23Z-3.  $158 + 105 - 159$  ----- 3= \_\_\_\_\_

23Z-4.  $21 - \pi + 23 - 17$  ----- 4= \_\_\_\_\_

23Z-5.  $6460 + 3540 - 4750 - 3510$  ----- 5= \_\_\_\_\_

23Z-6.  $-274 - 226 - 347 + 260 + 134$  ----- 6= \_\_\_\_\_

23Z-7.  $(0.466 - 0.931) + (0.625 - 1.64 - \pi)$  ----- 7= \_\_\_\_\_

23Z-8.  $0.846 - 2.42 + 1.48 - 1.72 - 0.737$  ----- 8= \_\_\_\_\_

23Z-9.  $77.3 \times 301 \times 258$  ----- 9= \_\_\_\_\_

23Z-10.  $133 \times 109 \times 735 \times 764$  ----- 10= \_\_\_\_\_

23Z-11. What is the result of adding pi and -2.3 and then multiplying that sum by -7190?----- 11= \_\_\_\_\_

23Z-12. The cost to launch an object on the Space X Falcon Heavy rocket to low earth orbit is \$1400 per kilogram. What is the cost of launching a 5U CubeSat that has a mass of 6.65 kilograms? ----- 12=\$ \_\_\_\_\_

23Z-13. How much fuel do I buy with \$50 if the cost of fuel is \$4.089 per gallon of fuel ?----- 13= \_\_\_\_\_ gal

23Z-14.  $(39)[95 \times 85/142]$  ----- 14= \_\_\_\_\_

23Z-15.  $-206/[297 \times 75 \times 201]$  ----- 15= \_\_\_\_\_

23Z-16.  $\{198/367\} \left[ \frac{98}{272 + 381} \right]$  ----- 16= \_\_\_\_\_

23Z-17.  $\left[ \frac{279}{200} \right] [(69/344) + 0.0869]$  ----- 17= \_\_\_\_\_

23Z-18.  $\left[ \frac{(4630/1590) - (2740/2260)}{61.9/46.3} \right]$  ----- 18= \_\_\_\_\_

23Z-19.  $\frac{(258/173) + (455/560)}{(0.103 - 0.306)}$  ----- 19= \_\_\_\_\_

23Z-20.  $\frac{(\pi)(13/37)(8/30)}{423}$  ----- 20= \_\_\_\_\_

23Z-21.  $(0.211)[86/122 \times 107/33] - 0.432$  ----- 21= \_\_\_\_\_

23Z-22.  $\frac{(\pi)(237/386)(309/308)}{(221/432)}$  ----- 22= \_\_\_\_\_

23Z-23.  $\left[ \frac{2480 + 1560}{3280 - 2200} \right] \left[ \frac{2490}{1630} \right]$  ----- 23= \_\_\_\_\_

23Z-24. To earn money for upcoming college expenses, Morgan works as a waitress at a local restaurant for 4 hours per night, Tuesday through Sunday. If she was paid \$4.15 per hour and earned on average \$33 per night in tips, what was her total weekly earnings?----- 24=\$ \_\_\_\_\_

23Z-25. Fazy, Goldie, and Patches, our three cats, each consume 0.75 pounds of cat food each day. How much cat food do they eat all together during the months of June, July, and August? ----- 25= \_\_\_\_\_ Lbs.

23Z-26. Naomi and Lupe are at opposite ends of a football field at the goal lines. At the same time, they start walking toward each other in a straight line along the same sideline. If Lupe walks at a steady rate of 4 feet/second and Naomi walks at a steady rate of 3 feet/second, what is the shortest time it takes them to reach each other? ----- 26= \_\_\_\_\_ s

23Z-27.  $[615 - (384 + 700)] + [(-0.725)(1090 - 667)]$  ----- 27= \_\_\_\_\_

23Z-28.  $\frac{(1.17 + 0.359)(3.78 + 4.49)}{(1.24 \times 10^{11})}$  ----- 28= \_\_\_\_\_

23Z-29.  $(0.0173)[(11.5/7.23)(0.108 + 0.0998)]$  ----- 29= \_\_\_\_\_

23Z-30.  $\frac{1}{-269} + \frac{1}{(3130 - 3220)}$  ----- 30= \_\_\_\_\_

23Z-31.  $\frac{(5.66 + 40.2)}{(5.10 \times 10^{11})}$  ----- 31= \_\_\_\_\_

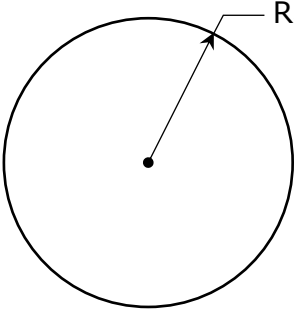
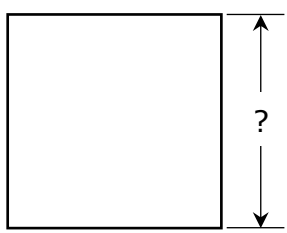
23Z-32.  $[5.55]^{\left[\frac{1/76.5}{1/44.8}\right]}$  ----- 32= \_\_\_\_\_

23Z-33.  $\left[\frac{1/171}{1/142}\right] + [0.35]$  ----- 33= \_\_\_\_\_

23Z-34.  $\left[\frac{1/69.5}{1/28.6}\right][1.00 \times 10^5]$  ----- 34= \_\_\_\_\_

23Z-35. If a quarter is 24.26 millimeters wide, what is the least number of quarters that can be laid side by side in a line to reach a length of one yard? (Remember 1 inch = 2.54 centimeters) ----- 35= \_\_\_\_\_ (integer)

23Z-36. The average daily amount of rainfall for the month of April in Dallas is 0.43". If it rained 2.05" on April 10<sup>th</sup>, 2.88" on April 19<sup>th</sup> and 4.02" on April 25<sup>th</sup>, how much does it need to rain on the last day of April to reach that average daily rainfall amount for the month? ----- 36= \_\_\_\_\_ in

<p>23Z-37.</p> <p style="text-align: center;">CIRCLE</p>  <p style="text-align: center;">Circumference = ?</p> <p>23Z-37= _____</p>	<p>23Z-38.</p> <p style="text-align: center;">SQUARE</p>  <p style="text-align: center;">Area = <math>4.72 \times 10^{13}</math></p> <p>23Z-38= _____</p>
--	--

23Z-39.  $\left[ \frac{27900 + (1/(5.74 \times 10^{-5}))}{(31700/40900) - 0.624} \right]^2$  ----- 39= \_\_\_\_\_

23Z-40.  $(184 + 117)^2(9.28 + 35.1)^2$  ----- 40= \_\_\_\_\_

23Z-41.  $\sqrt{\frac{480 + 117}{0.29 - 0.225}}$  ----- 41= \_\_\_\_\_

23Z-42.  $\sqrt{168 - 79 + 109} - \sqrt{110}$  ----- 42= \_\_\_\_\_

23Z-43.  $\sqrt{215} + \sqrt{308 + 262} - (\pi)\sqrt{43.2}$  ----- 43= \_\_\_\_\_

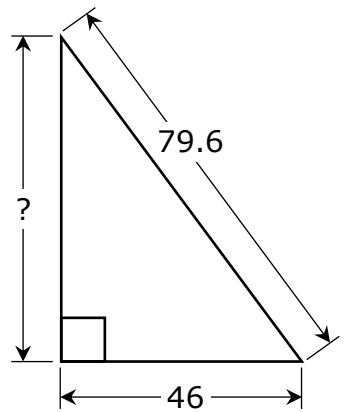
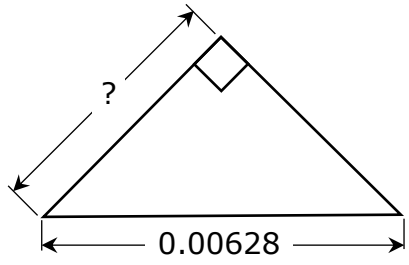
23Z-44.  $(1/\pi)\sqrt[3]{\frac{0.0368 + 0.021}{0.264 - 0.0945}}$  ----- 44= \_\_\_\_\_

23Z-45.  $[\sqrt{(2100/890)(17.1)}]^4$  ----- 45= \_\_\_\_\_

23Z-46.  $\sqrt[4]{16.4 - 545/224} + 1/\sqrt{6.97 \times 10^{-6} + 8.37 \times 10^{-6}}$  ----- 46= \_\_\_\_\_

23Z-47. Albert tied a 20' long rope to the top of an 18'9" tall wall. What is the maximum distance he can stretch the rope taut and touch the level ground near the wall with the rope? ----- 47= \_\_\_\_\_ ft

23Z-48. The hands of a clock measured 24.3 cm and 16.5 cm. At 3:00 o'clock, what is the distance between the tips of the hands? ----- 48= \_\_\_\_\_ cm

<p>23Z-49. <b>RIGHT TRIANGLE</b></p>  <p>23Z-49= _____</p>	<p>23Z-50. <b>ISOSCELES RIGHT TRIANGLE</b></p>  <p>23Z-50= _____</p>
---	--

23Z-51.  $\left[ \frac{70.1 + 30.1 + \sqrt{7970 + 1760}}{252/291} \right]^4$  ----- 51=\_\_\_\_\_

23Z-52.  $\frac{\sqrt{7.74 + \pi + 1.58}}{(24.1 - 80.7 + 67.4)^2}$  ----- 52=\_\_\_\_\_

23Z-53.  $\left[ \frac{2920 - 2430 + \sqrt{2.28 \times 10^8 / 1230}}{-4380 + 6540} \right]^5$  ----- 53=\_\_\_\_\_

23Z-54.  $\sqrt{\frac{(6.03 \times 10^5)(24000)}{(56900)(63100)}} - 1.43 + 1.88$  ----- 54=\_\_\_\_\_

23Z-55.  $(1630)(4.36 \times 10^7)^{1/2} - [(6.46 \times 10^{13})(3.72 \times 10^{14})]^{1/4}$  --- 55=\_\_\_\_\_

23Z-56.  $34500 + \sqrt{(37200)(34200)} - (41100 + 6790)$  ----- 56=\_\_\_\_\_

23Z-57.  $\sqrt{\frac{1/(101 - 33.7)}{(205)(18.6 + 39.5)^{-5}}}$  ----- 57=\_\_\_\_\_

23Z-58.  $\sqrt{\frac{(22.8)(63.8)}{(13.3) + (22.4)}} + 1/(0.156)^1$  ----- 58=\_\_\_\_\_

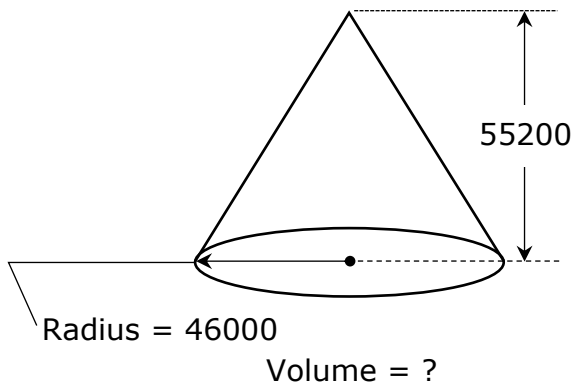
23Z-59. On a particular day the money exchange rate for the Mexican Peso to the US Dollar was 20.4344 Pesos to 1 US Dollar, while the Australian Dollar (AUD) to Mexican Peso rate was 14.0515 Mexican Pesos to 1 Australian Dollar. If Mrs. Pena converted \$250 to Pesos and converted her Pesos in Sidney, Australia to Australian Dollars, how many Australian Dollars did she get to spend in Sidney for birthday gifts?---- 59=\_\_\_\_\_ AUD

23Z-60. To calculate the distance a dropped object falls, in feet, you simply multiply one-half times the acceleration due to gravity times the length of time squared the object is in the air. So, if the acceleration due to gravity is 32.174 ft/sec<sup>2</sup> and the object falls 4 feet, how long did the object take to fall that distance? ----- 60=\_\_\_\_\_ s



23Z-61.

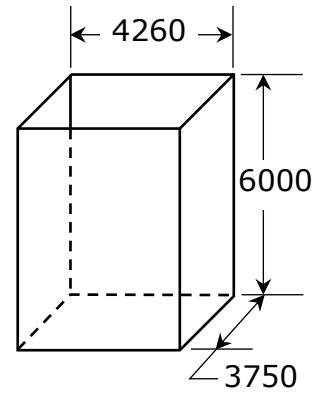
RIGHT CIRCULAR CONE



23Z-61= \_\_\_\_\_

23Z-62.

SOLID RECTANGULAR BOX



23Z-62= \_\_\_\_\_

23Z-63.  $\frac{20!}{25!}$  ----- 63= \_\_\_\_\_

23Z-64. (deg)  $(173 - 147)\cos(290^\circ)$  ----- 64= \_\_\_\_\_

23Z-65.  $(1.66 \times 10^5 - 87100)^{-5}(8.00 \times 10^5)$  ----- 65= \_\_\_\_\_

23Z-66. (rad)  $\frac{\tan(177)}{2460/3300}$  ----- 66= \_\_\_\_\_

23Z-67. (deg)  $[17.3]\tan(112^\circ - 116^\circ)$  ----- 67= \_\_\_\_\_

23Z-68. (rad)  $\tan[(3 - 2.29)(15.2)]$  ----- 68= \_\_\_\_\_

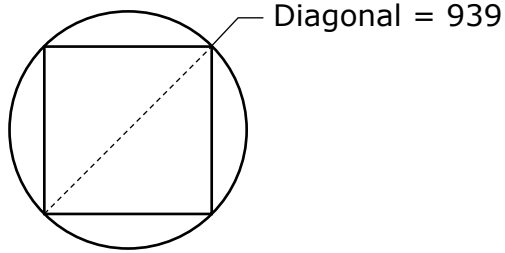
23Z-69. (deg)  $\frac{\sin(486^\circ)}{\tan(486^\circ)}[5.68]$  ----- 69= \_\_\_\_\_

23Z-70.  $(723 - 666)e^{\pi - 0.473}$  ----- 70= \_\_\_\_\_

23Z-71. What is the percent decrease for a population, if at one time the population was 1390 and 10 years later the population was 979?-- 71= \_\_\_\_\_ %

23Z-72. If a number squared minus two and a half times that same number is 5.3, what is that number if it is positive? ----- 72= \_\_\_\_\_

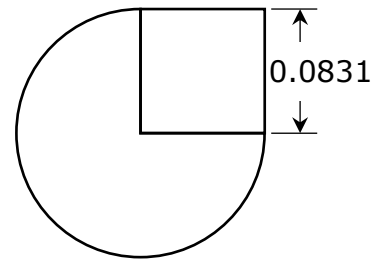
23Z-73.  
CIRCUMSCRIBED SQUARE AND CIRCLE



$$\frac{\text{Circle Area}}{\text{Square Area}} = ?$$

23Z-73= \_\_\_\_\_

23Z-74.  
THREE-QUARTERS CIRCLE AND SQUARE



$$\text{Total Area} = ?$$

23Z-74= \_\_\_\_\_

23Z-75.  $\frac{0.154 + \sqrt{(0.0983)(0.201) + (0.15)(0.509)}}{\sqrt{\sqrt{\pi} + 0.397}}$  ----- 75= \_\_\_\_\_

23Z-76.  $\ln\left[\frac{69.8 + 69.5 + 36.4}{735 + 396 - 162}\right]$  ----- 76= \_\_\_\_\_

23Z-77.  $(26800)_{10}^{(0.631)(\pi)}$  ----- 77= \_\_\_\_\_

23Z-78.  $\frac{\text{Log}[578 + (135)(5.26)]}{2.77 + \text{Log}[7770 + 8060]}$  ----- 78= \_\_\_\_\_

23Z-79.  $1 + 3 + 5 + \dots + 515$  ----- 79= \_\_\_\_\_

23Z-80.  $(0.27) - \frac{(0.27)^2}{2} + \frac{(0.27)^3}{3} - \frac{(0.27)^4}{4}$  ----- 80= \_\_\_\_\_

## 2022 – 2023 UIL MS Calculator Test C Answer Key

$$\begin{aligned} 23Z-1 &= -1040 \\ &= -1.04 \times 10^3 \end{aligned}$$

$$\begin{aligned} 23Z-2 &= 44.0 \\ &= 4.40 \times 10^1 \end{aligned}$$

$$\begin{aligned} 23Z-3 &= 104 \\ &= 1.04 \times 10^2 \end{aligned}$$

$$\begin{aligned} 23Z-4 &= 23.9 \\ &= 2.39 \times 10^1 \end{aligned}$$

$$\begin{aligned} 23Z-5 &= 1740 \\ &= 1.74 \times 10^3 \end{aligned}$$

$$\begin{aligned} 23Z-6 &= -453 \\ &= -4.53 \times 10^2 \end{aligned}$$

$$\begin{aligned} 23Z-7 &= -4.62 \\ &= -4.62 \times 10^0 \end{aligned}$$

$$\begin{aligned} 23Z-8 &= -2.55 \\ &= -2.55 \times 10^0 \end{aligned}$$

$$23Z-9 = 6.00 \times 10^6$$

$$23Z-10 = 8.14 \times 10^9$$

$$\begin{aligned} 23Z-11 &= -6050 \\ &= -6.05 \times 10^3 \end{aligned}$$

$$\begin{aligned} 23Z-12 &= 9310.00 \\ &\text{Dollar Answer} \end{aligned}$$

$$\begin{aligned} 23Z-13 &= 12.2 \\ &= 1.22 \times 10^1 \end{aligned}$$

$$\begin{aligned} 23Z-14 &= 2220 \\ &= 2.22 \times 10^3 \end{aligned}$$

$$23Z-15 = -4.60 \times 10^{-5}$$

$$\begin{aligned} 23Z-16 &= 0.0810 \\ &= 8.10 \times 10^{-2} \end{aligned}$$

$$\begin{aligned} 23Z-17 &= 0.401 \\ &= 4.01 \times 10^{-1} \end{aligned}$$

$$\begin{aligned} 23Z-18 &= 1.27 \\ &= 1.27 \times 10^0 \end{aligned}$$

$$\begin{aligned} 23Z-19 &= -11.3 \\ &= -1.13 \times 10^1 \end{aligned}$$

$$\begin{aligned} 23Z-20 &= 0.000696 \\ &= 6.96 \times 10^{-4} \end{aligned}$$

$$\begin{aligned} 23Z-21 &= 0.0503 \\ &= 5.03 \times 10^{-2} \end{aligned}$$

$$\begin{aligned} 23Z-22 &= 3.78 \\ &= 3.78 \times 10^0 \end{aligned}$$

$$\begin{aligned} 23Z-23 &= 5.71 \\ &= 5.71 \times 10^0 \end{aligned}$$

$$\begin{aligned} 23Z-24 &= 297.60 \\ &\text{Dollar Answer} \end{aligned}$$

$$\begin{aligned} 23Z-25 &= 207 \\ &= 2.07 \times 10^2 \end{aligned}$$

$$\begin{aligned} 23Z-26 &= 42.9 \\ &= 4.29 \times 10^1 \end{aligned}$$

$$\begin{aligned} 23Z-27 &= -776 \\ &= -7.76 \times 10^2 \end{aligned}$$

$$23Z-28 = 1.02 \times 10^{-10}$$

$$\begin{aligned} 23Z-29 &= 0.00572 \\ &= 5.72 \times 10^{-3} \end{aligned}$$

$$\begin{aligned} 23Z-30 &= -0.0148 \\ &= -1.48 \times 10^{-2} \end{aligned}$$

$$23Z-31 = 8.99 \times 10^{-11}$$

$$\begin{aligned} 23Z-32 &= 3.25 \\ &= 3.25 \times 10^0 \end{aligned}$$

$$\begin{aligned} 23Z-33 &= 1.18 \\ &= 1.18 \times 10^0 \end{aligned}$$

$$\begin{aligned} 23Z-34 &= 41200 \\ &= 4.12 \times 10^4 \end{aligned}$$

$$\begin{aligned} 23Z-35 &= 38 \\ &\text{Integer Answer} \end{aligned}$$

$$\begin{aligned} 23Z-36 &= 4.09 \\ &= 4.09 \times 10^0 \end{aligned}$$

$$23Z-37 = 4.35 \times 10^6$$

$$23Z-38 = 6.87 \times 10^6$$

## 2022 – 2023 UIL MS Calculator Test C Answer Key

$$23Z-39 = 9.00 \times 10^{10}$$

$$23Z-40 = 1.78 \times 10^8$$

$$23Z-41 = 95.8$$
$$= 9.58 \times 10^1$$

$$23Z-42 = 3.58$$
$$= 3.58 \times 10^0$$

$$23Z-43 = 17.9$$
$$= 1.79 \times 10^1$$

$$23Z-44 = 0.222$$
$$= 2.22 \times 10^{-1}$$

$$23Z-45 = 1630$$
$$= 1.63 \times 10^3$$

$$23Z-46 = 257$$
$$= 2.57 \times 10^2$$

$$23Z-47 = 6.96$$
$$= 6.96 \times 10^0$$

$$23Z-48 = 29.4$$
$$= 2.94 \times 10^1$$

$$23Z-49 = 65.0$$
$$= 6.50 \times 10^1$$

$$23Z-50 = 0.00444$$
$$= 4.44 \times 10^{-3}$$

$$23Z-51 = 2.78 \times 10^9$$

$$23Z-52 = 0.0303$$
$$= 3.03 \times 10^{-2}$$

$$23Z-53 = 0.0141$$
$$= 1.41 \times 10^{-2}$$

$$23Z-54 = 2.46$$
$$= 2.46 \times 10^0$$

$$23Z-55 = -1.69 \times 10^6$$

$$23Z-56 = 22300$$
$$= 2.23 \times 10^4$$

$$23Z-57 = 219$$
$$= 2.19 \times 10^2$$

$$23Z-58 = 12.8$$
$$= 1.28 \times 10^1$$

$$23Z-59 = 364$$
$$= 3.64 \times 10^2$$

$$23Z-60 = 0.499$$
$$= 4.99 \times 10^{-1}$$

$$23Z-61 = 1.22 \times 10^{14}$$

$$23Z-62 = 9.59 \times 10^{10}$$

$$23Z-63 = 1.57 \times 10^{-7}$$

$$23Z-64 = 8.89$$
$$= 8.89 \times 10^0$$

$$23Z-65 = 2.62 \times 10^{-19}$$

$$23Z-66 = 2.46$$
$$= 2.46 \times 10^0$$

$$23Z-67 = -1.21$$
$$= -1.21 \times 10^0$$

$$23Z-68 = 4.84$$
$$= 4.84 \times 10^0$$

$$23Z-69 = -3.34$$
$$= -3.34 \times 10^0$$

$$23Z-70 = 822$$
$$= 8.22 \times 10^2$$

$$23Z-71 = 29.6$$
$$= 2.96 \times 10^1$$

$$23Z-72 = 3.87$$
$$= 3.87 \times 10^0$$

$$23Z-73 = 1.57$$
$$= 1.57 \times 10^0$$

$$23Z-74 = 0.0232$$
$$= 2.32 \times 10^{-2}$$

$$23Z-75 = 0.270$$
$$= 2.70 \times 10^{-1}$$

$$23Z-76 = -1.71$$
$$= -1.71 \times 10^0$$

$$23Z-77 = 2.57 \times 10^6$$

$$23Z-78 = 0.446$$
$$= 4.46 \times 10^{-1}$$

$$23Z-79 = 66600$$
$$= 6.66 \times 10^4$$

$$23Z-80 = 0.239$$
$$= 2.39 \times 10^{-1}$$

CONTESTANT NUMBER:

**FOR GRADER USE ONLY**

Test/Tiebreaker (#correct)

\_\_\_\_ / \_\_\_\_ Initials \_\_\_\_

\_\_\_\_ / \_\_\_\_ Initials \_\_\_\_

Papers contending to place:

\_\_\_\_ / \_\_\_\_ Initials \_\_\_\_



**University Interscholastic League  
A+ Chess Puzzle Contest • Answer Sheet**

*Write your contestant number in the upper right corner, and circle your grade below.*

**Circle Grade Level:    2    3    4    5    6    7    8**

**Test** (*circle only one answer for each question*)

1.    a    b    c    d

2.    a    b    c    d

3.    a    b    c    d

4.    a    b    c    d

5.    a    b    c    d

6.    a    b    c    d

7.    a    b    c    d

8.    a    b    c    d

9.    a    b    c    d

10.   a    b    c    d

11.   a    b    c    d

12.   a    b    c    d

13.   a    b    c    d

14.   a    b    c    d

15.   a    b    c    d

16.   a    b    c    d

17.   a    b    c    d

18.   a    b    c    d

19.   a    b    c    d

20.   a    b    c    d

*Questions  
#17- 20  
only for  
Grades 4-8*

**Tiebreaker** (*circle only one answer for each question*)

1.    a    b    c    d

2.    a    b    c    d

3.    a    b    c    d

4.    a    b    c    d

5.    a    b    c    d

6.    a    b    c    d

7.    a    b    c    d

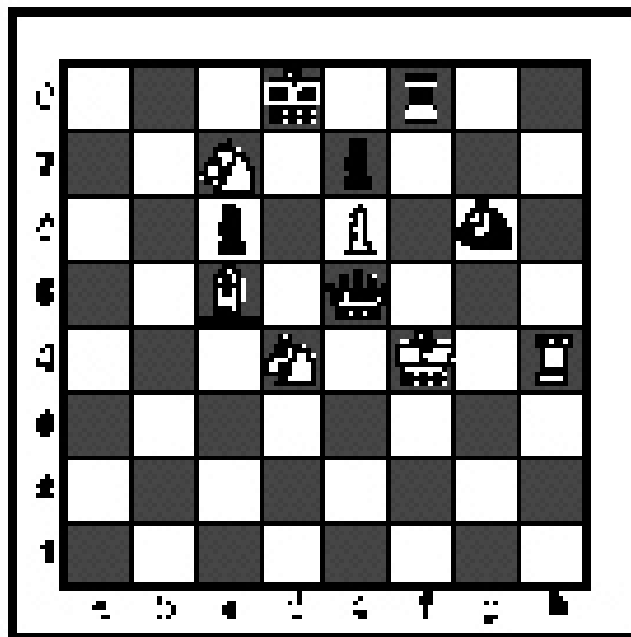
8.    a    b    c    d

# INVITATIONAL 2022-2023

## A+ ACADEMICS



University Interscholastic League



# Chess Puzzle Solving

grades 2 & 3

**DO NOT OPEN TEST  
UNTIL TOLD TO DO SO**

## How to read and answer questions on this test

- To answer the questions on this test, you'll need to know how to read chess moves. It's simple to do.
- Every square on the board has an "address" made up of a letter and a number.

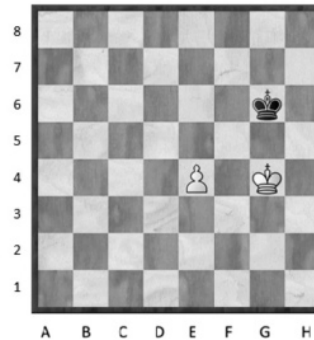


Piece Names	Each chessman can also be represented by a symbol, except for the pawn. (Figurine Notation)
King	
Queen	
Rook	
Bishop	
Knight	
Pawn	<b>a-h</b> (We write the file it's on.)

- To make them easy to read, the questions on this test use the figurine piece symbols on the right, above.
- When answering the puzzle questions, remember that white pawns move "up" the diagrams. Black pawns move "down" the diagrams.

At right are two sample moves.

If you look closely at the diagrams in the questions below, you'll see that the frame around the diagram labels the ranks (1-8) and files (a-h) to help you.

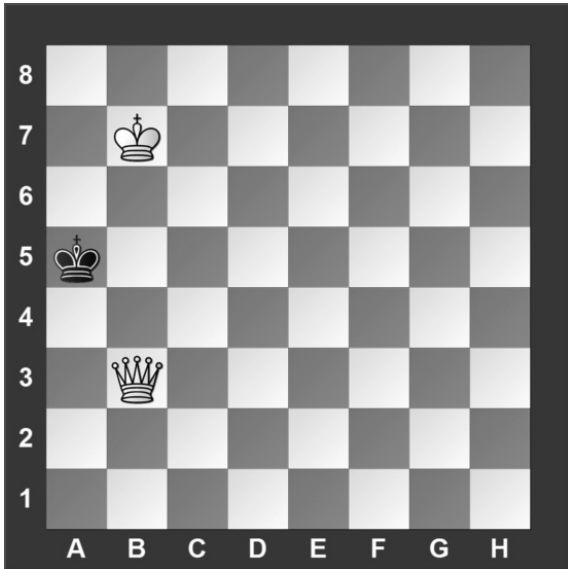


White has just played **e4**.



Black has just played ... **Nf6**.

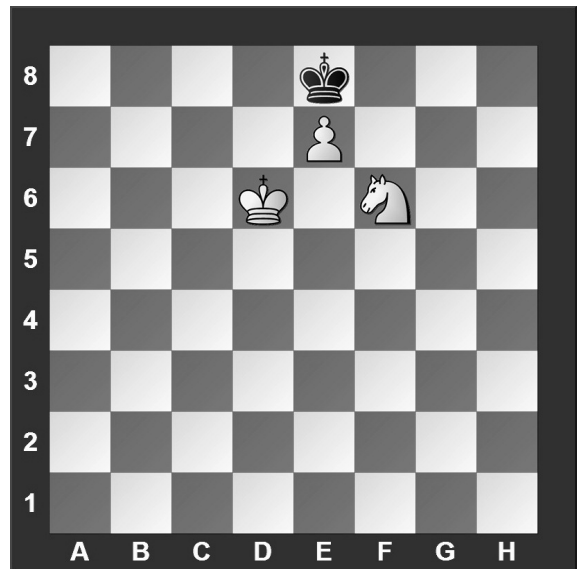
#1. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

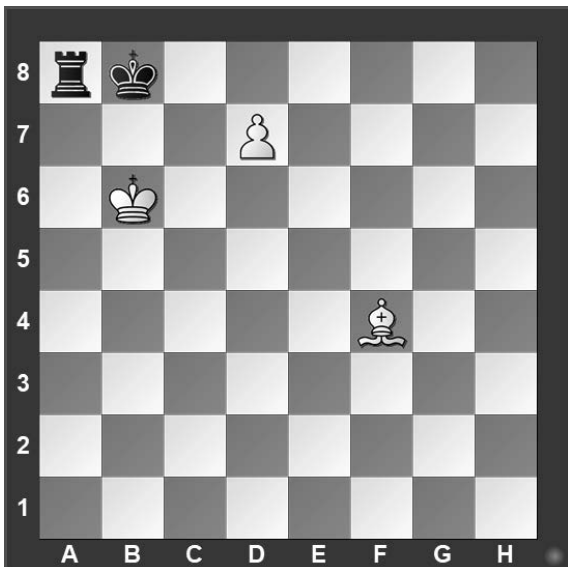
#2. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

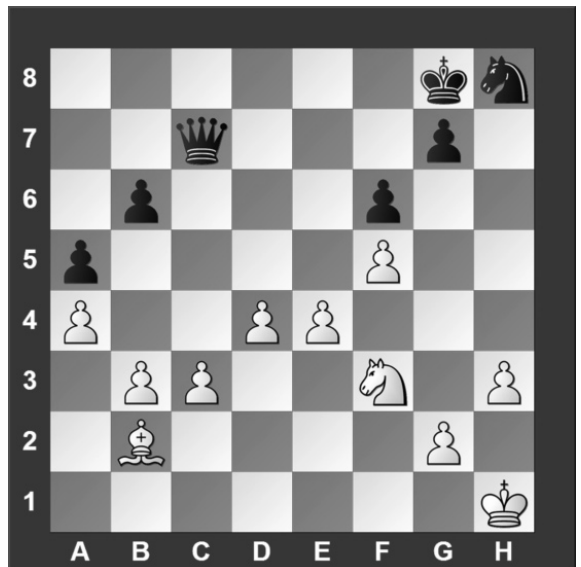
#3. Black to move



What term best describes this situation?

- a) Black is in check.
- b) Black is in stalemate.
- c) Black is in checkmate.
- d) None of the above.

#4.

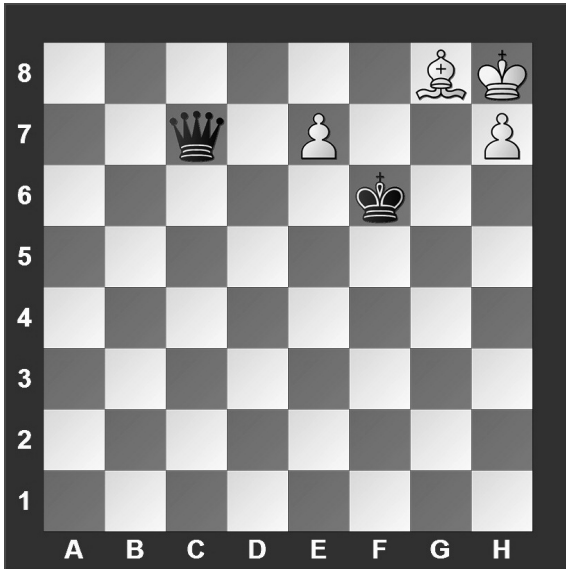


Which side has material advantage?

- a) White
- b) Black
- c) It's even.
- d) It's not possible to tell without knowing who is to move.



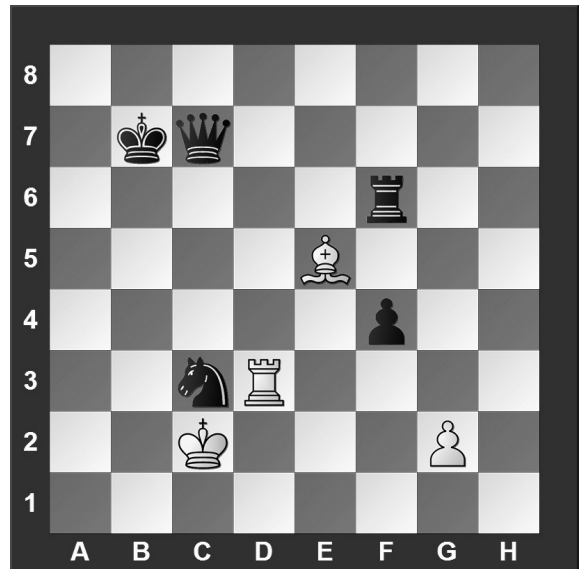
#5. White to move



What piece should White promote to?

- a) Queen.
- b) Bishop.
- c) Rook.
- d) Knight.

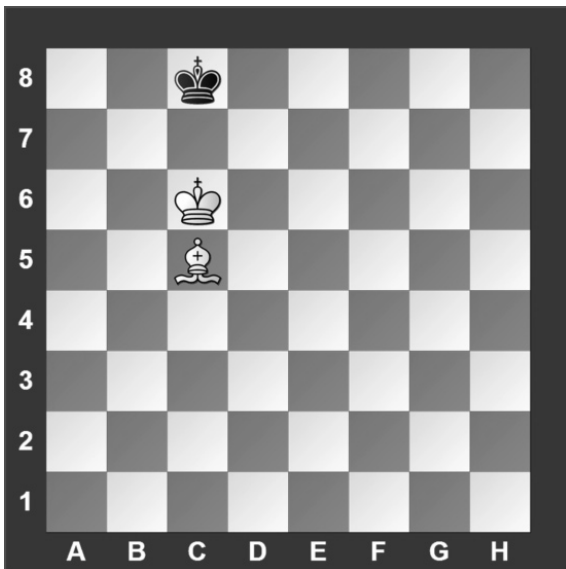
#6. White to move



What piece should White capture?

- a) Queen
- b) Knight
- c) Rook
- d) Pawn

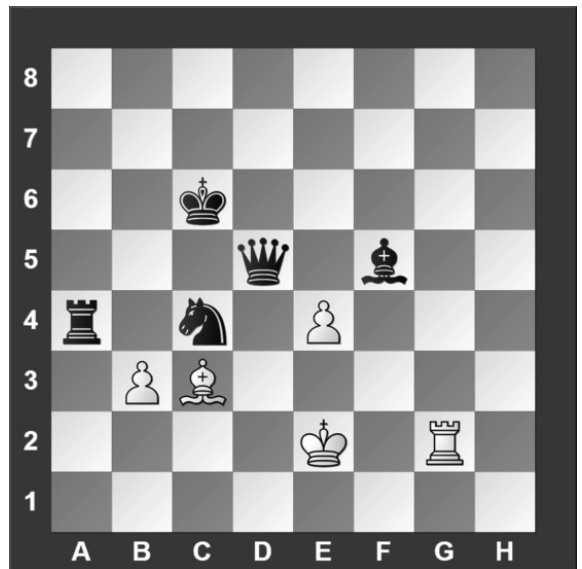
#7. White to move



What is the outcome of the game?

- a) White wins.
- b) Black wins.
- c) Draw.
- d) It is not possible to tell.

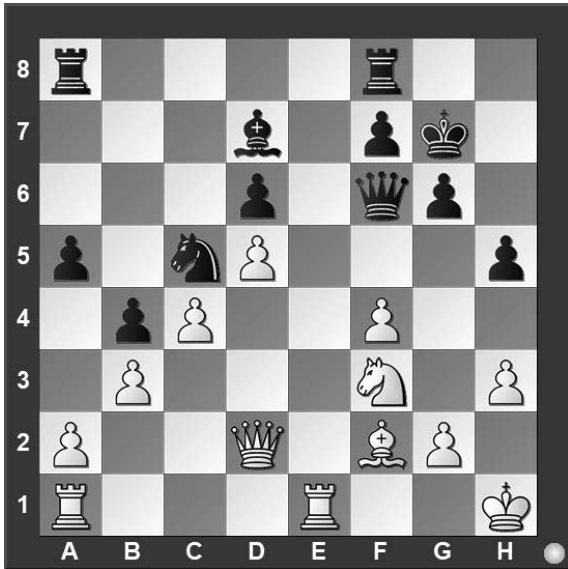
#8. White to move



What piece should white capture?

- a) Black's queen.
- b) Black's knight.
- c) Black's bishop.
- d) Black's rook.

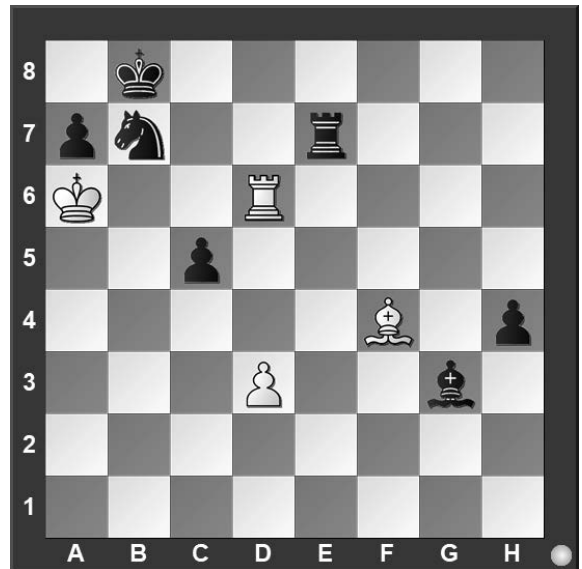
#9. White to move



What is White's best move?

- a)  $\text{Qh4}$
- b)  $\text{Qd4}$
- c)  $\text{Qxc5}$
- d)  $\text{Ng5}$

#10. White to move



If White can checkmate Black in one move, what is the checkmating move?

- a)  $\text{Rd7}$
- b)  $\text{Rd8}$
- c)  $\text{Rc6}$
- d) There is no checkmate

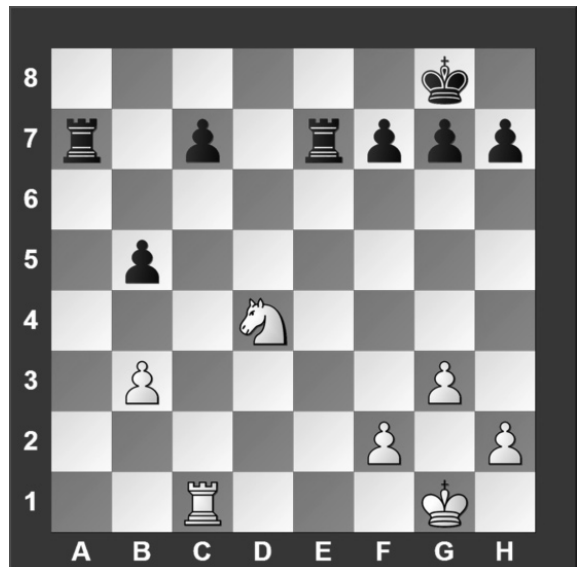
#11. White to move



What is White's best move?

- a)  $\text{Qxf3}$
- b)  $\text{gxf3}$
- c)  $\text{Qxh7}$
- d)  $\text{bxa4}$

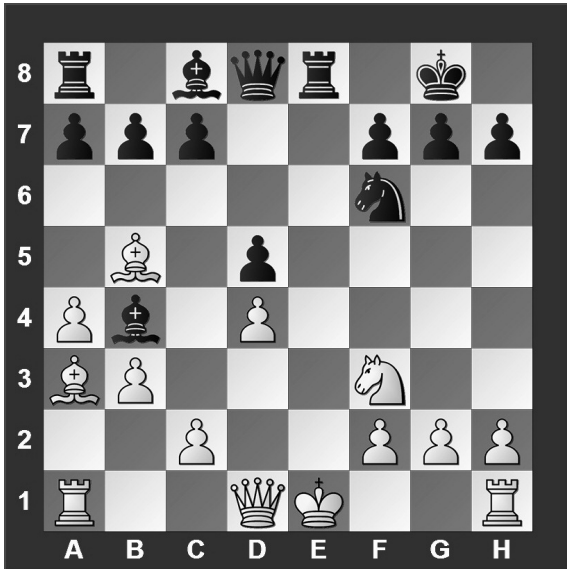
#12. White to move



What is White's best move?

- a)  $\text{Qc6}$
- b)  $\text{Qf5}$
- c)  $\text{Rxc7}$
- d)  $\text{b4}$

#13. White to move



Which move is possible for White?

- a) Short castle.
- b) To capture the bishop.
- c) To capture the rook.
- d) Move the king to f1.

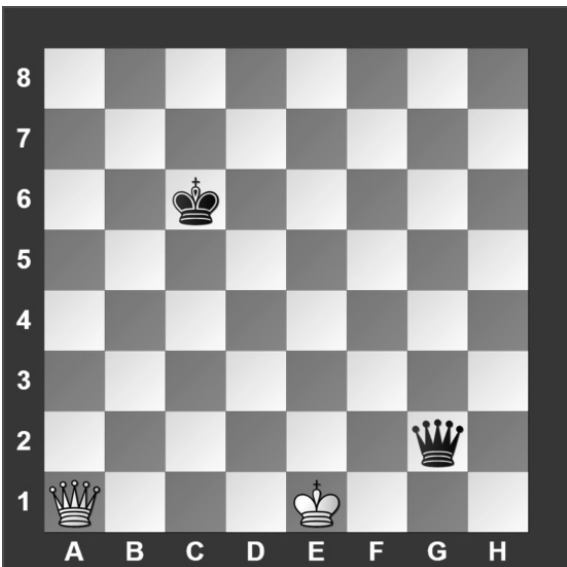
#14. White to move



Black just played f7 to f5. Which pawn can White capture?

- a) Black's a-pawn.
- b) Black's b-pawn.
- c) Black's f-pawn.
- d) Black's g-pawn.

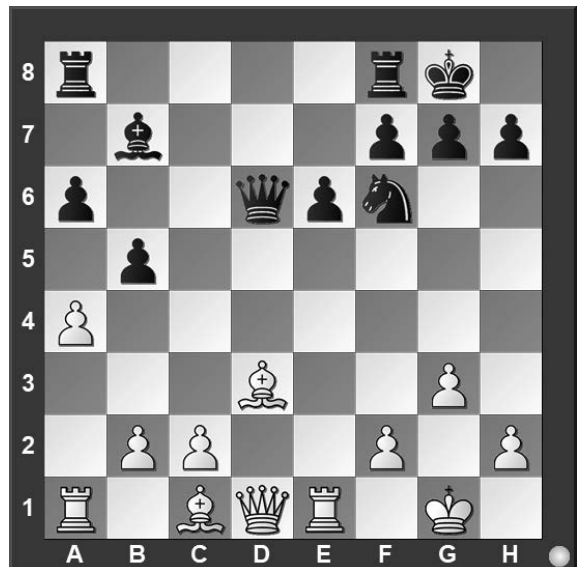
#15. White to move



What is White's best move?

- a) ♔f6
- b) ♔c3
- c) ♔c1
- d) ♔a8

#16. White to move



What is White's best move?

- a) a×b5
- b) ♙f4
- c) ♙×h7
- d) ♙g5



**University Interscholastic League  
A+ Chess Puzzle Contest  
2022-2023 Invitational — Grades 2 & 3**

**ANSWER KEY**

**Test**

- |       |       |
|-------|-------|
| 1. B  | 11. C |
| 2. C  | 12. A |
| 3. C  | 13. D |
| 4. B  | 14. C |
| 5. D  | 15. D |
| 6. A  | 16. C |
| 7. C  |       |
| 8. A  |       |
| 9. B  |       |
| 10. B |       |

**Tiebreaker**

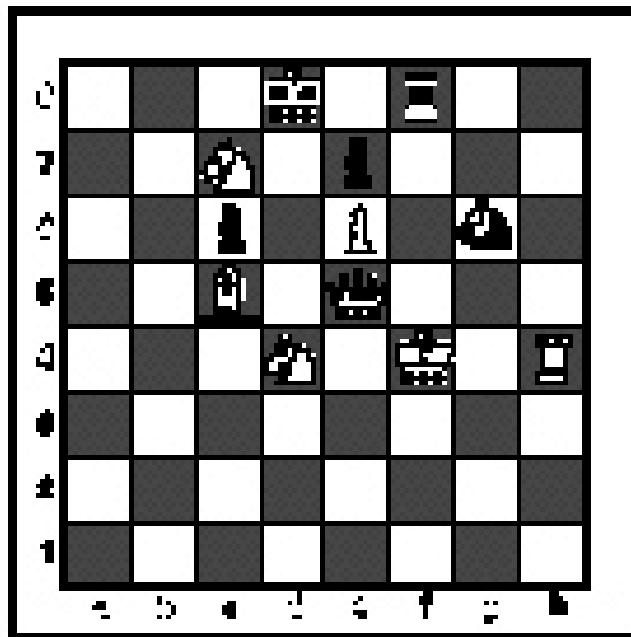
- |      |      |
|------|------|
| 1. A | 5. A |
| 2. A | 6. D |
| 3. C | 7. D |
| 4. B | 8. A |

# INVITATIONAL 2022-2023

## A+ ACADEMICS



University Interscholastic League



# Chess Puzzle Solving

grades 4 & 5

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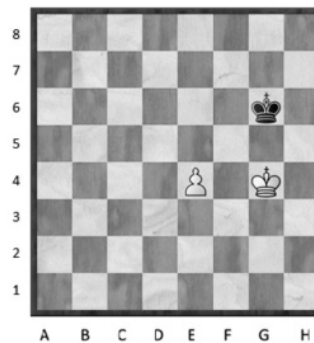


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Knight	
Pawn	<b>a-h</b> (We write the file it's on.)

- To make them easy to read, the questions on this test use the figurine piece symbols on the right, above.
- When answering the puzzle questions, remember that white pawns move "up" the diagrams. Black pawns move "down" the diagrams.

At right are two sample moves.

If you look closely at the diagrams in the questions below, you'll see that the frame around the diagram labels the ranks (1-8) and files (a-h) to help you.

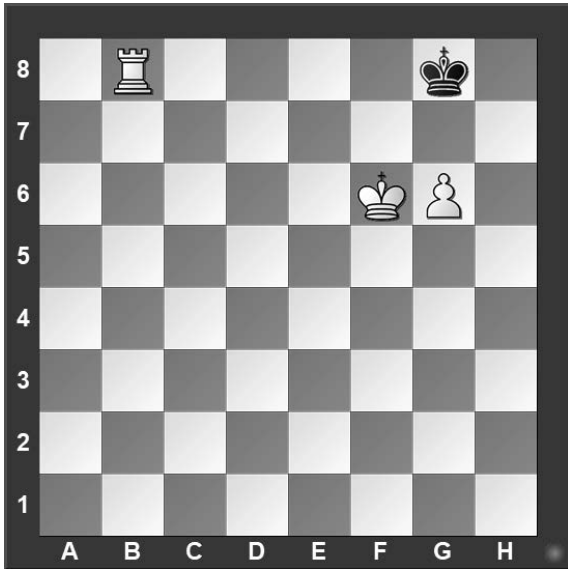


White has just played **e4**.



Black has just played ... **Nf6**.

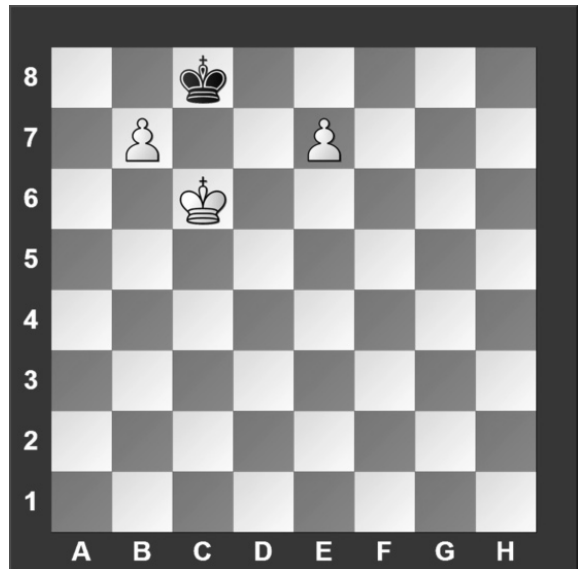
#1. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

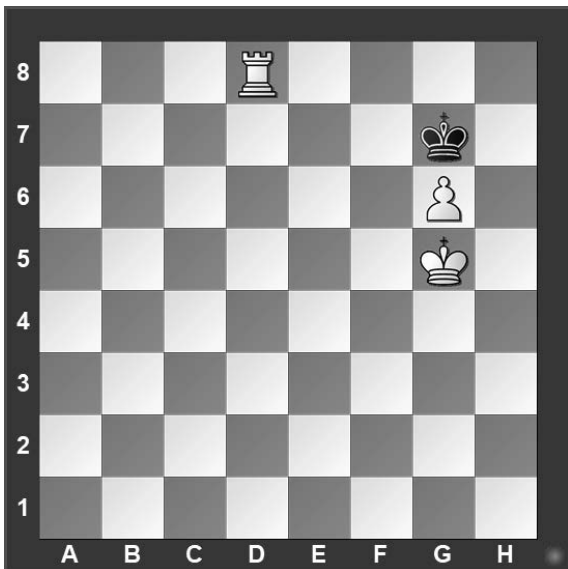
#2. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

#3 Black to move.



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

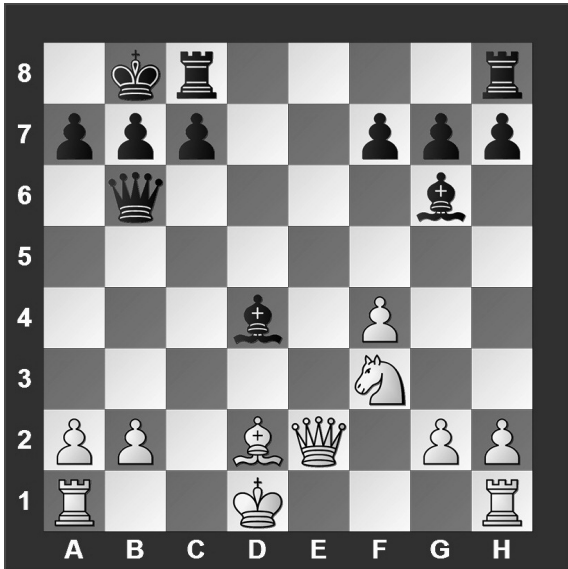
#4.



Which side has material advantage?

- a) White
- b) Black
- c) It's even.
- d) It's not possible to tell without knowing who is to move.

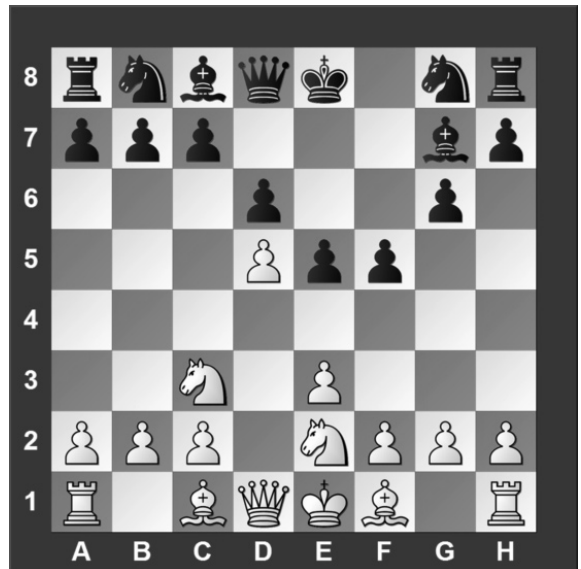
#5. White to move



Which move below is possible for White?

- a) Short Castle.
- b) Long Castle.
- c) Capture the bishop.
- d) All of the above.

#6. White to move



Black just played e7 to e5. Which pawn can be captured?

- a) Black's e-pawn
- b) Black's f-pawn
- c) Black's g-pawn
- d) White can't capture a pawn.

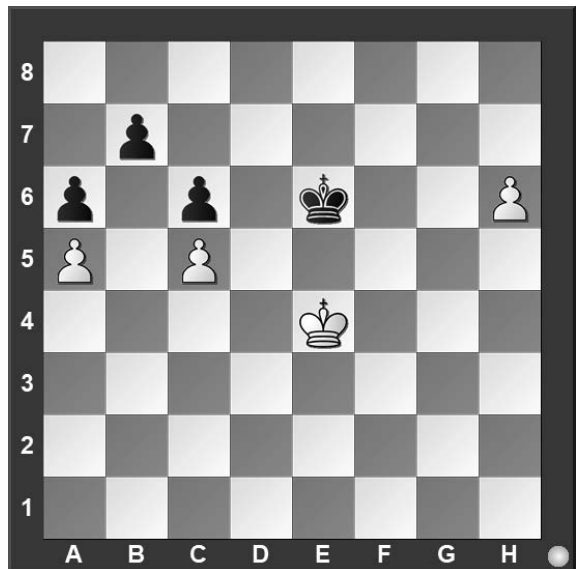
#7. White to move



What is White's best move?

- a) ♖a5
- b) ♖e5
- c) c6
- d) ♙e4

#8. White to move

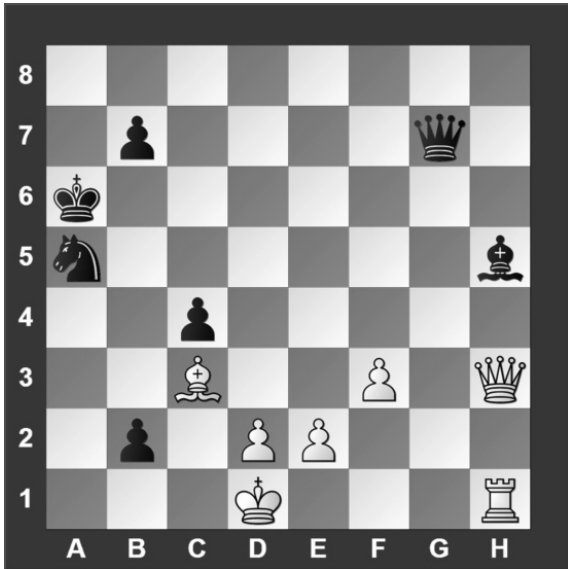


With the best play, what is the outcome of the game?

- a) White wins.
- b) Black wins.
- c) Draw.
- d) It is not possible to tell.



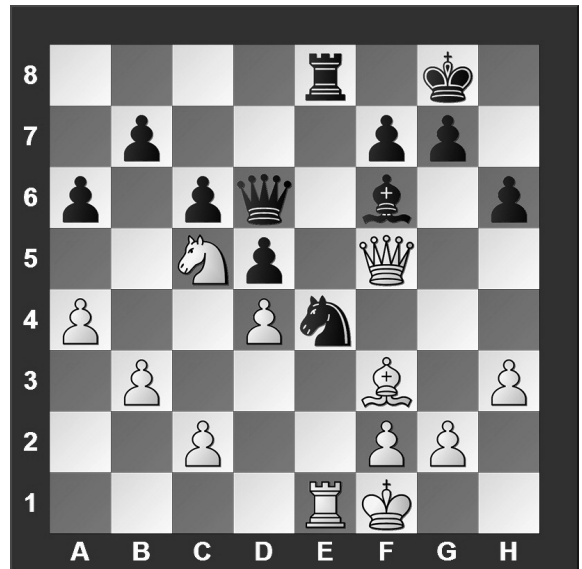
#9. White to move



What piece should White capture?

- a) Queen
- b) Bishop
- c) Knight
- d) Pawn

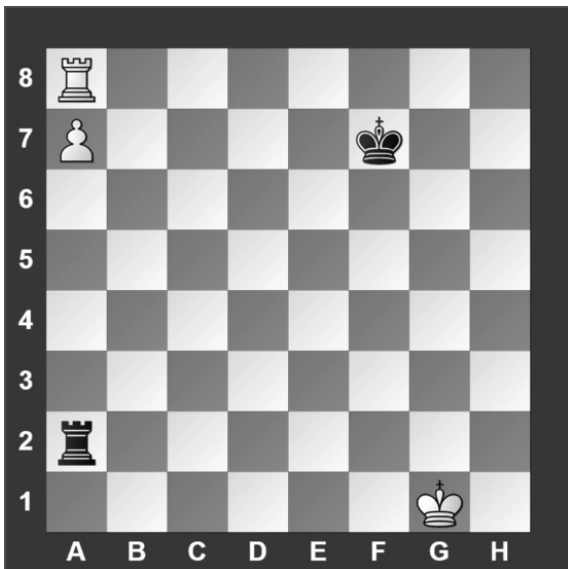
#10. White to move



What is White's best move?

- a)  $\text{N} \times \text{e}4$
- b)  $\text{B} \times \text{e}4$
- c)  $\text{Q} \times \text{e}4$
- d)  $\text{K} \times \text{e}4$

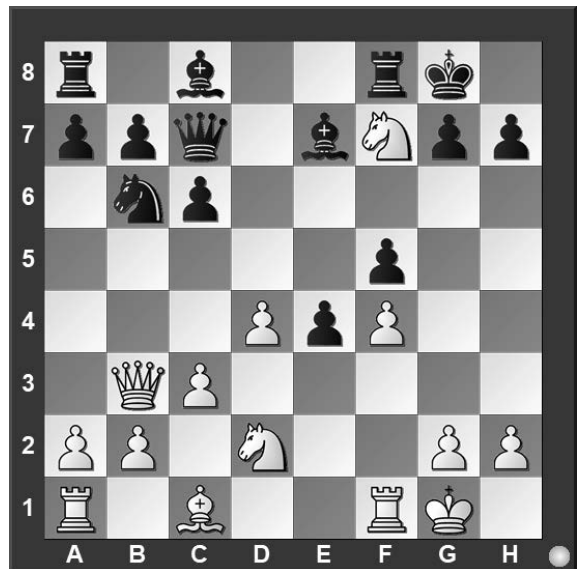
#11. White to move



What is White's best move?

- a)  $\text{R} \text{d}8$
- b)  $\text{R} \text{f}8$
- c)  $\text{R} \text{h}8$
- d)  $\text{K} \text{h}1$

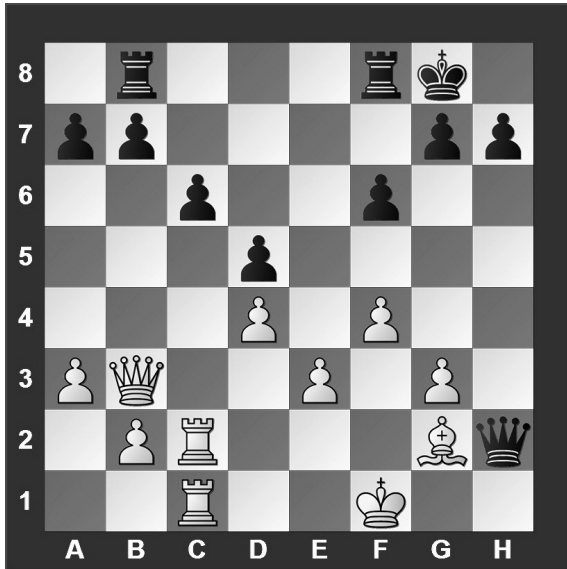
#12. White to move



If White can checkmate Black in three moves, what is the first move?

- a)  $\text{N} \text{g}5$
- b)  $\text{N} \text{e}5$
- c)  $\text{N} \text{h}6$
- d)  $\text{N} \text{d}6$

#13. White to move



What is White's best move?

- a) ♔×b7
- b) ♖×c6
- c) ♗×d5
- d) ♕e1

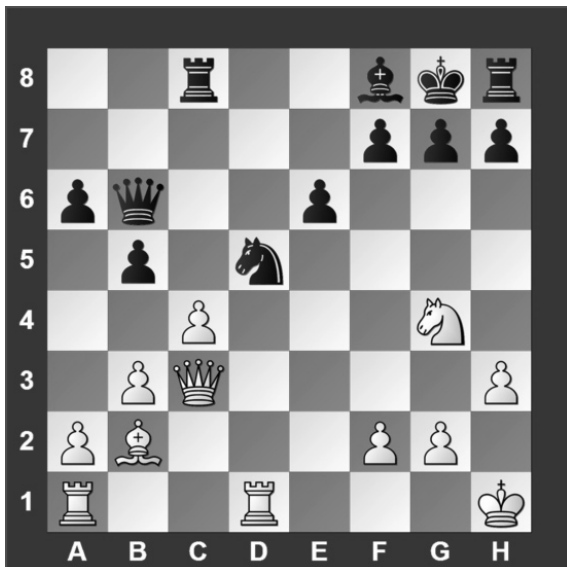
#14. White to move



If White can checkmate Black in two moves, what is the *first* move?

- a) ♖×f6
- b) ♖×c5
- c) ♖d6
- d) ♖g3

#15. White to move



What is White's best move?

- a) ♔×g7
- b) ♖h6
- c) c×d5
- d) ♖×d5

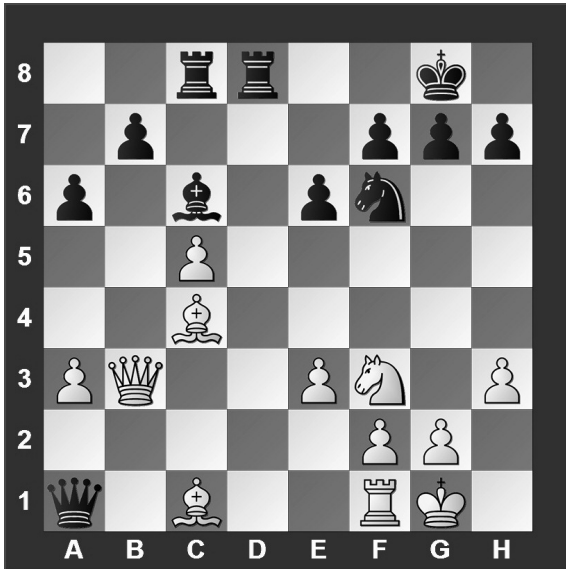
#16. White to move



What is White's best move?

- a) ♖×g6
- b) ♖h5
- c) ♗×d1
- d) ♖×d1

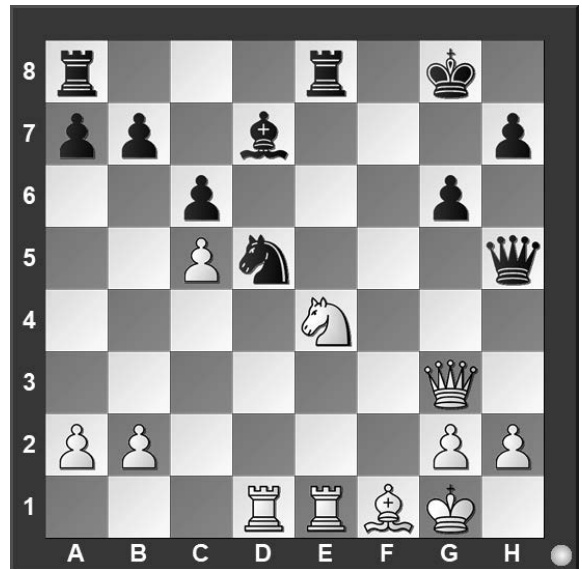
#17. White to move



What is White's best move?

- a) ♔b2
- b) ♕b2
- c) ♔xe6
- d) ♖e5

#18. White to move



What is White's best move?

- a) ♖d6
- b) ♖f6
- c) ♖xd5
- d) ♔c4

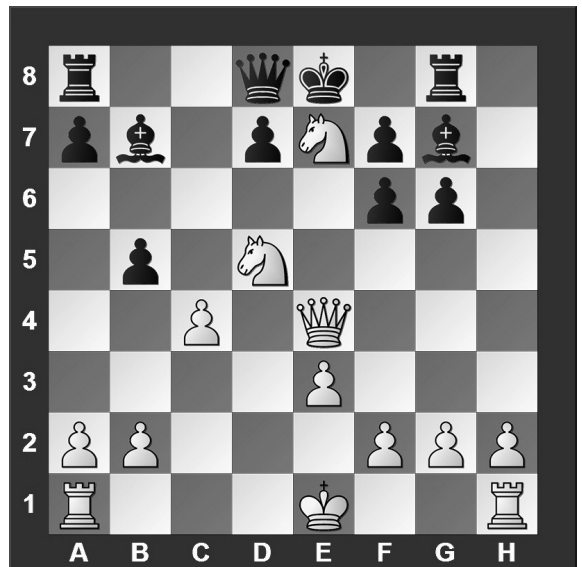
#19. White to move



If White can checkmate Black in three moves, what's the *first* move?

- a) ♕xd7
- b) ♕xh7
- c) ♖g1
- d) ♕h6

#20. White to move



White can checkmate Black in two moves, what's the first move?

- a) ♖xg8
- b) ♖xf6
- c) ♖xg6
- d) ♕xg6



**University Interscholastic League  
A+ Chess Puzzle Contest  
2022-2023 Invitational — Grades 4 & 5**

**ANSWER KEY**

**Test**

- |       |       |
|-------|-------|
| 1. A  | 11. C |
| 2. C  | 12. C |
| 3. B  | 13. C |
| 4. A  | 14. C |
| 5. C  | 15. B |
| 6. A  | 16. B |
| 7. C  | 17. A |
| 8. A  | 18. C |
| 9. D  | 19. B |
| 10. C | 20. C |

**Tiebreaker**

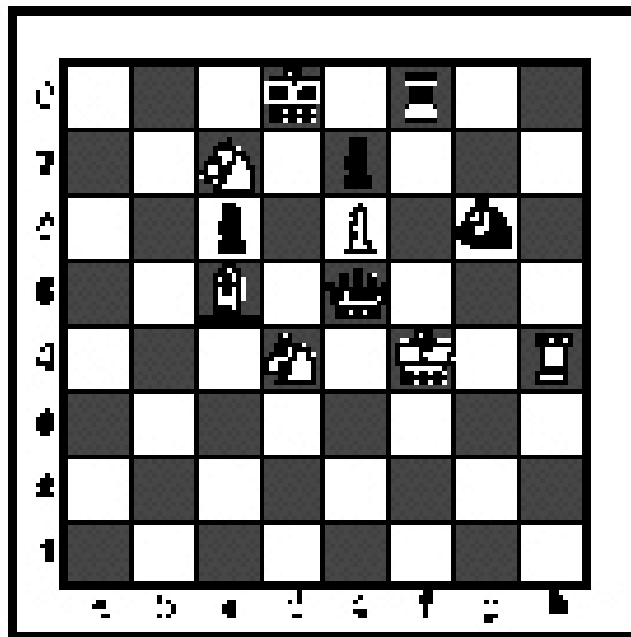
- |      |      |
|------|------|
| 1. A | 5. A |
| 2. A | 6. D |
| 3. C | 7. D |
| 4. B | 8. A |

# INVITATIONAL 2022-2023

## A+ ACADEMICS



University Interscholastic League



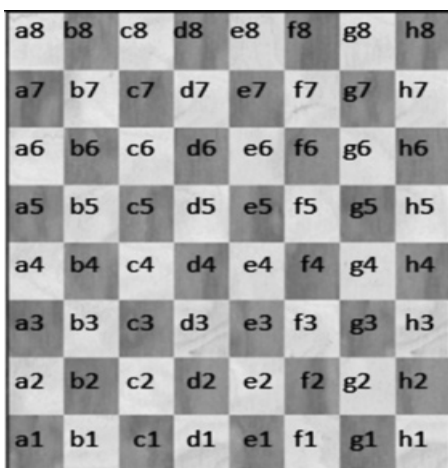
# Chess Puzzle Solving

grades 6, 7, 8

**DO NOT OPEN TEST  
UNTIL TOLD TO DO SO**

## How to read and answer questions on this test

- To answer the questions on this test, you'll need to know how to read chess moves. It's simple to do.
- Every square on the board has an "address" made up of a letter and a number.

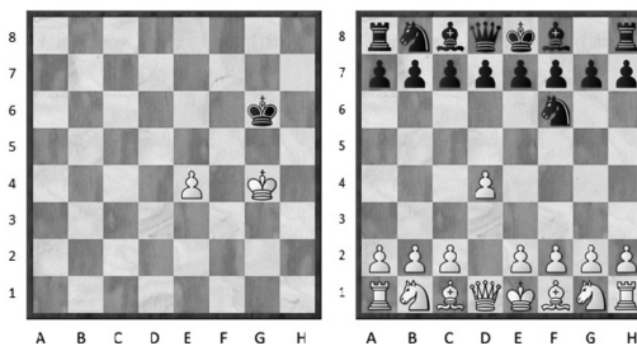


Piece Names	Each chessman can also be represented by a symbol, except for the pawn. (Figurine Notation)
King	
Queen	
Rook	
Bishop	
Knight	
Pawn	<b>a-h</b> (We write the file it's on.)

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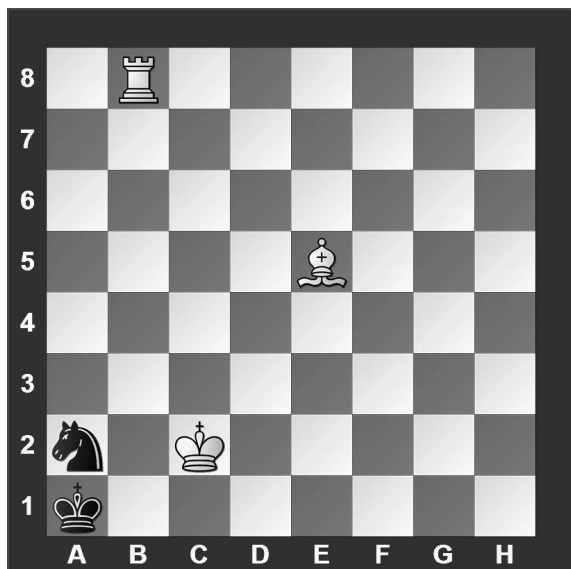
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White has just played **e4**. Black has just played ... **Nf6**.

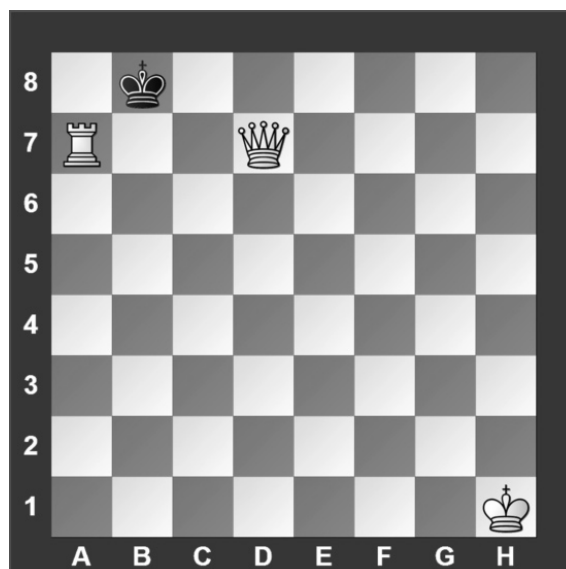
#1. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

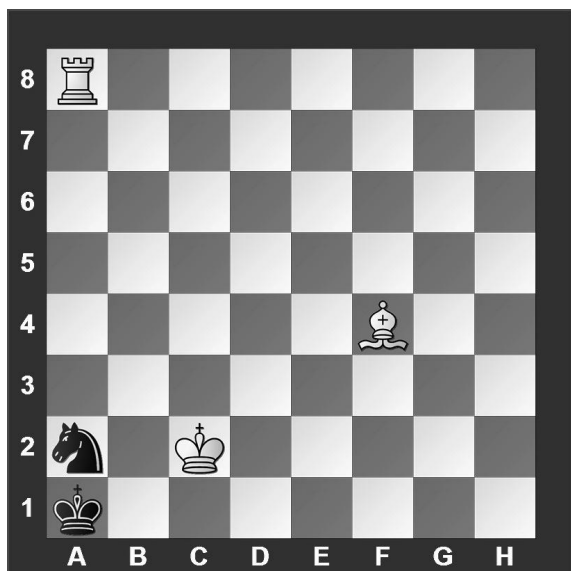
#2. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

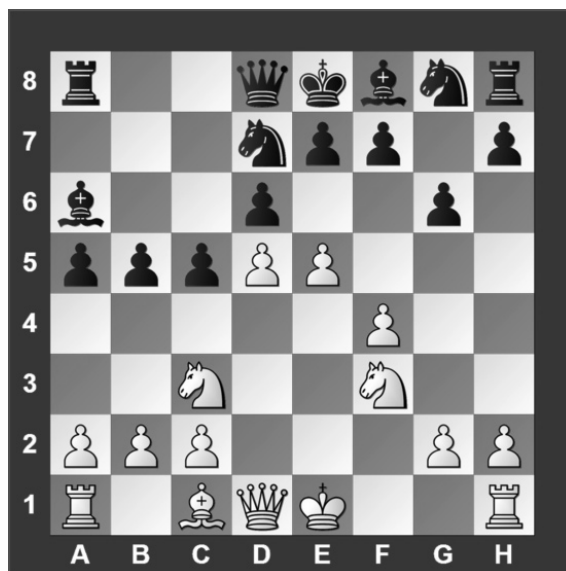
#3. Black to move



What term best describes this situation?

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- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

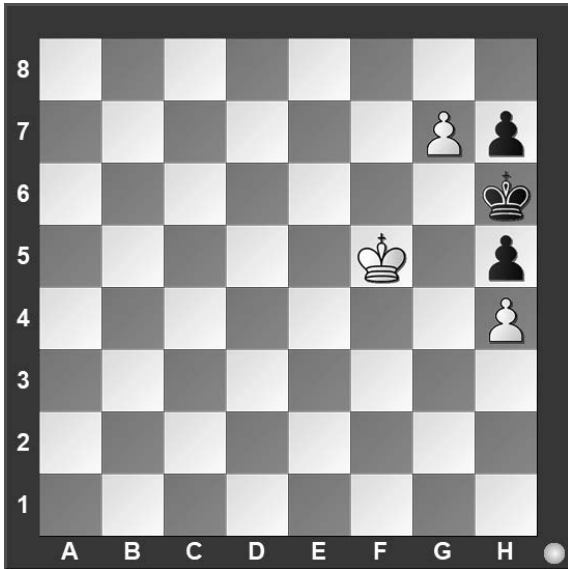
#4.



Black just played c7 to c5. Which pawn can be captured?

- a) Black's b-pawn
- b) Black's d-pawn
- c) Black's c-pawn
- d) All of the above

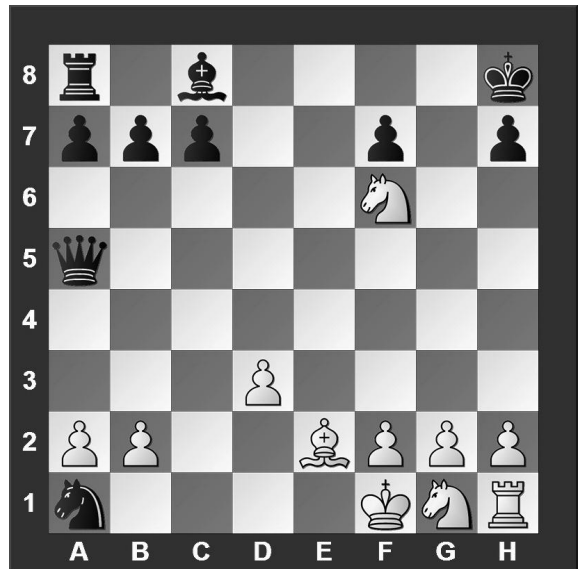
#5. White to move



What piece should White promote to?

- a) Queen
- b) Rook
- c) Bishop
- d) Knight

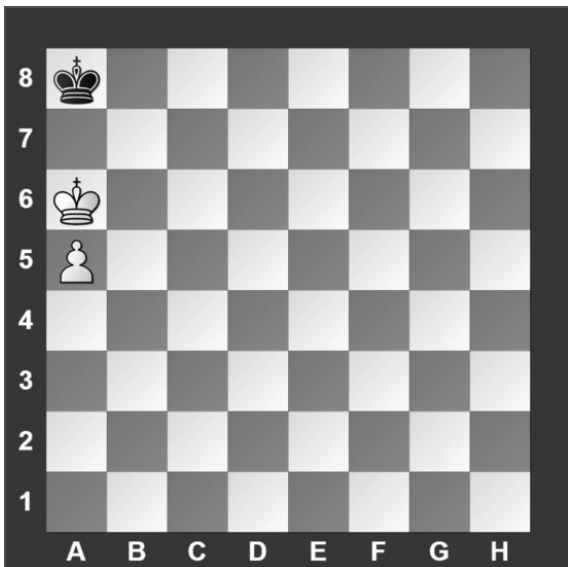
#6.



Which side has material advantage?

- a) White
- b) Black
- c) It's even.
- d) It's not possible to tell without knowing who is to move.

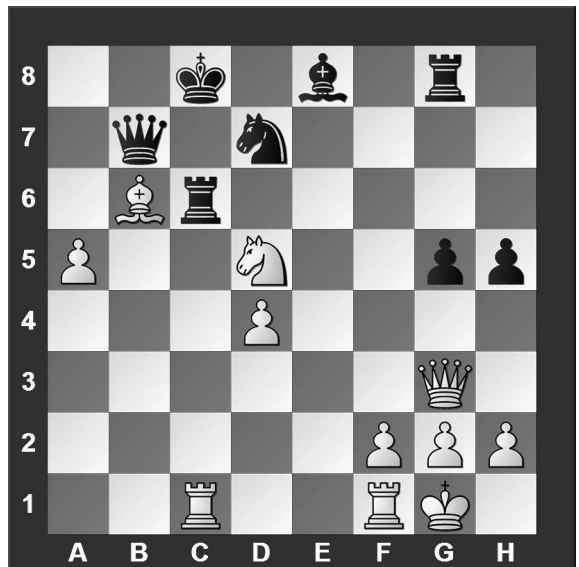
#7. White to move



What is the outcome of the game?

- a) White wins
- b) Black wins
- c) Draw
- d) Impossible to tell

#8. White to move

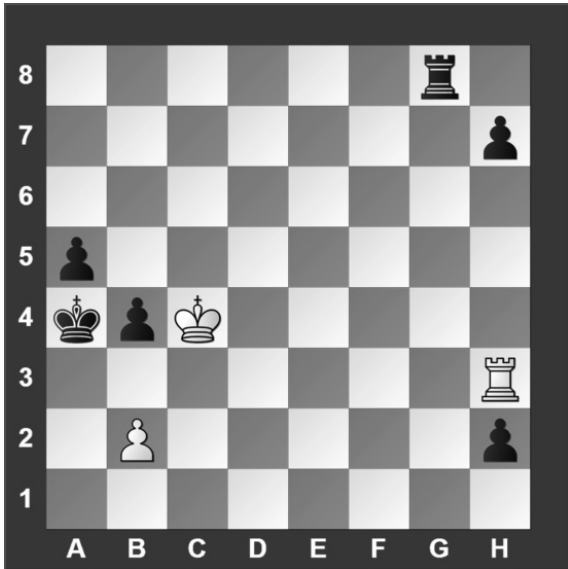


What is White's best move?

- a) ♔c7
- b) ♖xc6
- c) ♞e7
- d) ♕b8



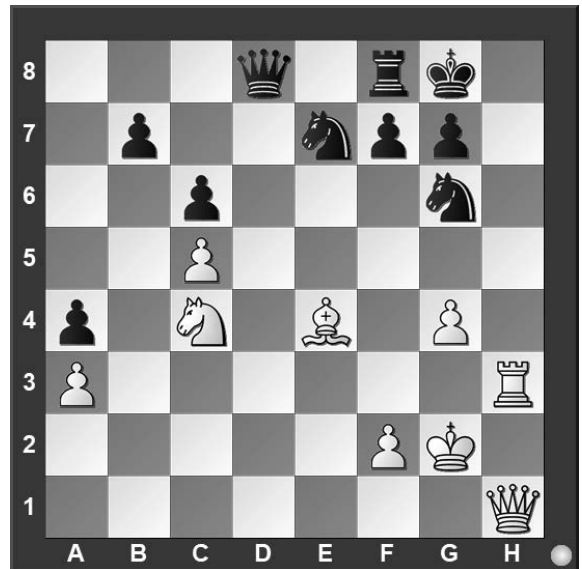
#9. White to move



White can checkmate Black in two moves, what's the *first* move?

- a) b3
- b) ♖×h7
- c) ♖a3
- d) ♖×h2

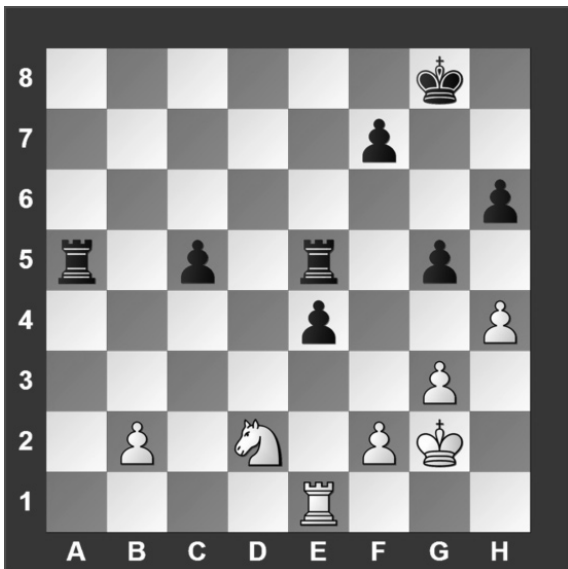
#10. White to move



If White can checkmate Black in two moves, what is the first move?

- a) ♖h8
- b) ♖d3
- c) ♗×g6
- d) ♘e5

#11. White to move



What is White's best move?

- a) ♘×e4
- b) ♘c4
- c) ♖×e4
- d) ♘b3

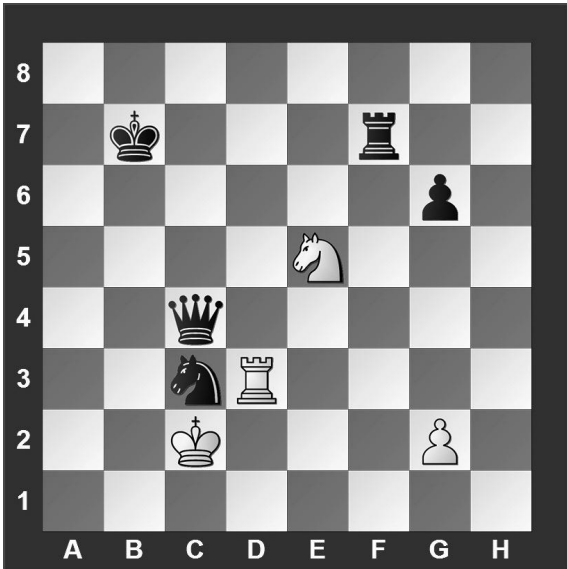
#12. White to move



What is White's best move?

- a) ♖g1
- b) ♗×d8
- c) ♖×g4
- d) ♖g3

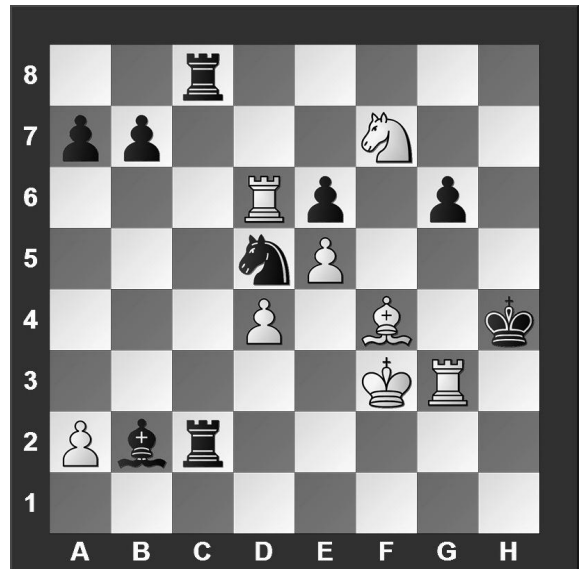
#13. White to move



What piece should White capture?

- a) Queen.
- b) Rook.
- c) Knight.
- d) Pawn.

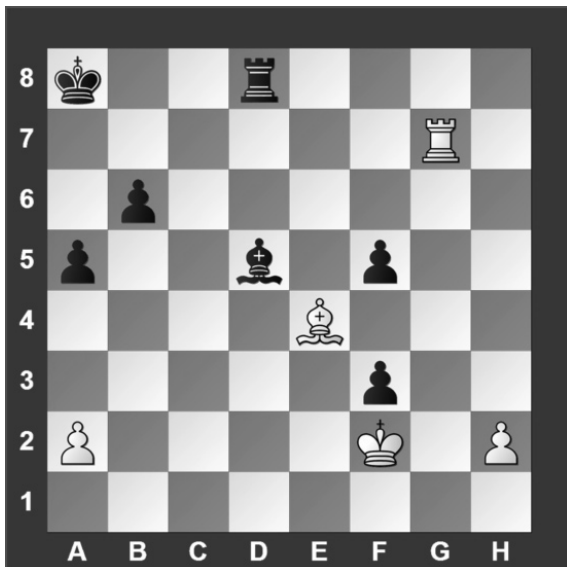
#14. White to move



If White can checkmate Black in two moves, what's the first move?

- a) ♖h3
- b) ♖g4
- c) ♕g5
- d) ♖x d5

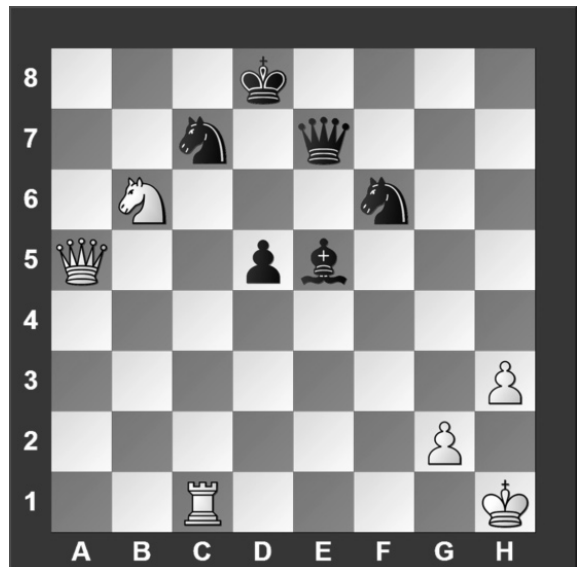
#15. White to move



What is White's best move?

- a) ♕x d5
- b) ♕x f5
- c) ♖g8
- d) ♕x f3

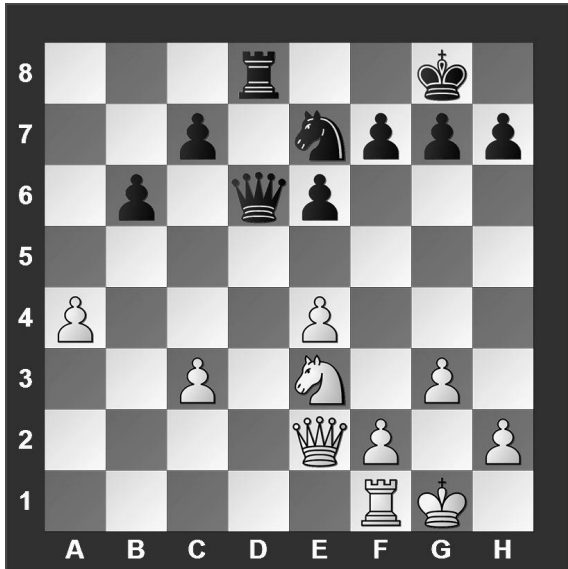
#16. White to move



White can checkmate Black in two moves, what is the *first* move?

- a) ♘x d5
- b) ♚a8
- c) ♖x c7
- d) ♚x d5

#17. White to move



What is White's best move?

- a) e5
- b) ♘c4
- c) ♖d1
- d) ♔g2

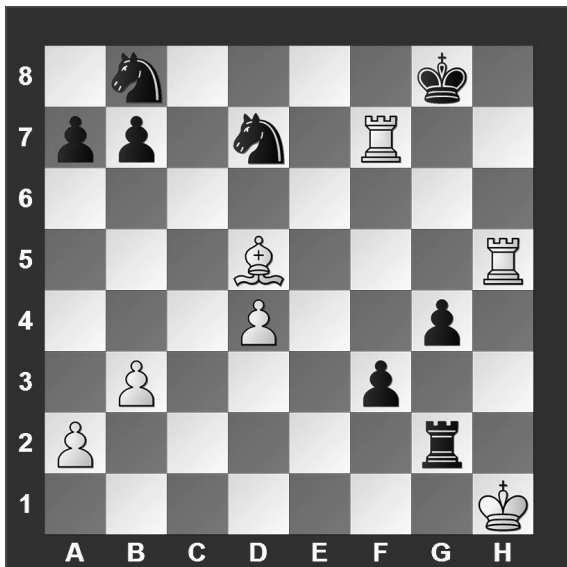
#18. White to move



How many moves does it take to checkmate Black?

- a) 1
- b) 2
- c) 3
- d) There is no checkmate

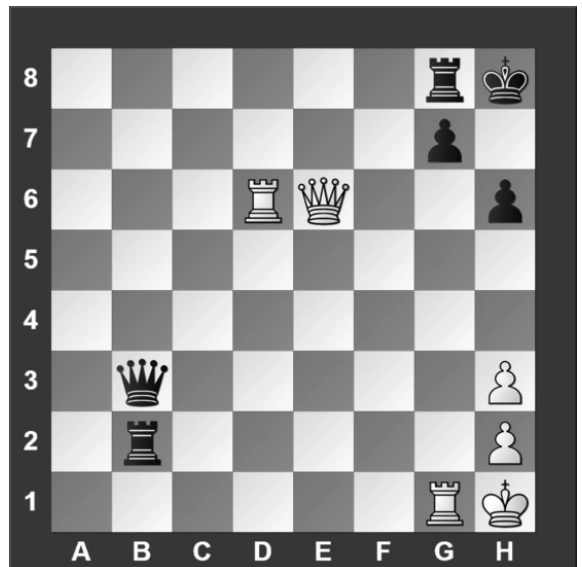
#19. White to move



If White can checkmate Black in two moves, what's the first move?

- a) ♖h8
- b) ♖f8
- c) ♖x d7
- d) ♕x f3

#20. White to move



If White can checkmate Black in two moves, what's the *first* move?

- a) ♔xg8
- b) ♖xg7
- c) ♔xh6
- d) ♔g6



**University Interscholastic League  
A+ Chess Puzzle Contest  
2022-2023 Invitational — Grades 6, 7, and 8  
ANSWER KEY**

**Test**

- |      |       |
|------|-------|
| 1. C | 11. B |
| 2. B | 12. C |
| 3. B | 13. A |
| 4. C | 14. C |
| 5. D | 15. C |
| 6. B | 16. B |
| 7. C | 17. C |
| 8. C | 18. A |
| 9. C | 19. C |
| 10.A | 20. C |

**Tiebreaker**

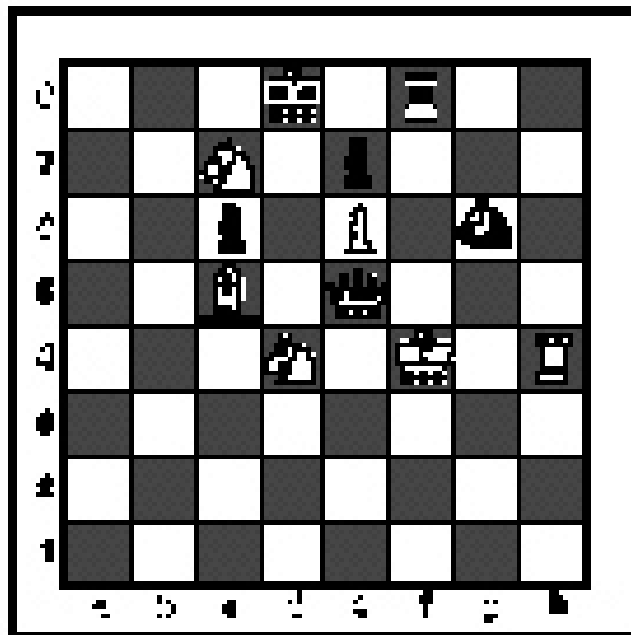
- |      |      |
|------|------|
| 1. A | 5. A |
| 2. A | 6. D |
| 3. C | 7. D |
| 4. B | 8. A |

**INVITATIONAL 2022-2023**

**A+ ACADEMICS**



University Interscholastic League

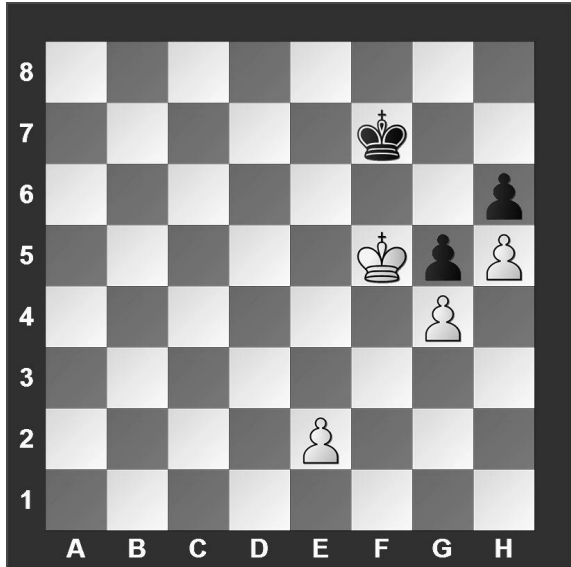


# Chess Puzzle Solving

## TIEBREAKER - ALL GRADES

**DO NOT OPEN TEST  
UNTIL TOLD TO DO SO**

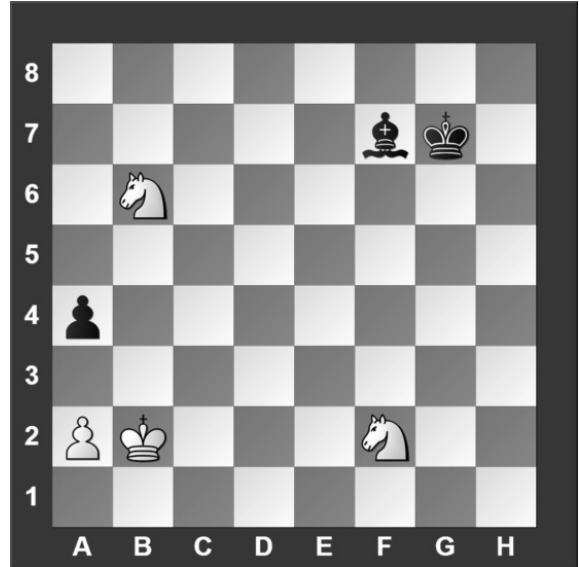
#1. White to move



What should be the outcome of the game?

- a) White wins.
- b) Black wins.
- c) Draw.
- d) It is not possible to tell.

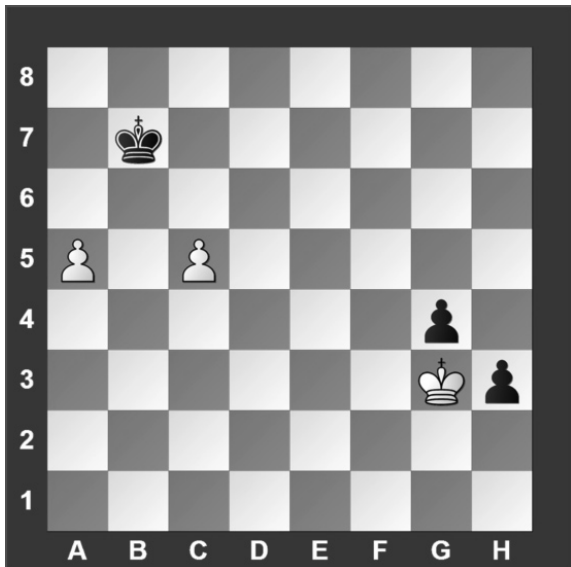
#2. White to move



What is White's best move?

- a) a3
- b) ♘×a4
- c) ♖a3
- d) ♘e4

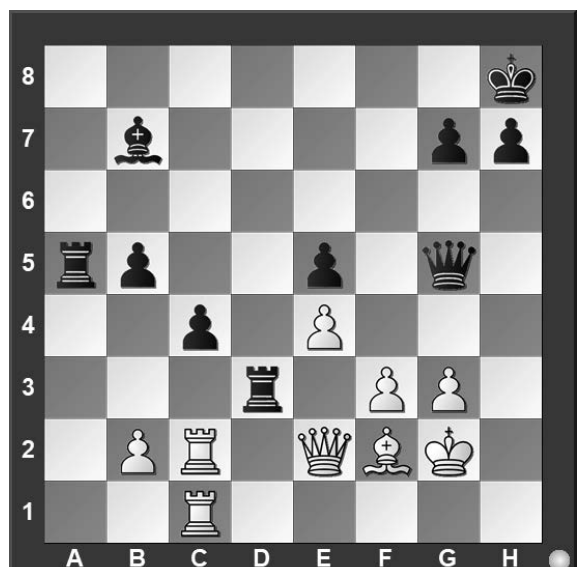
#3. White to move



With the best play, what is the outcome of the game?

- a) White wins.
- b) Black wins.
- c) Draw.
- d) It is not possible to tell.

#4. White to move



What is White's best move?

- a) ♖d1
- b) ♖×d3
- c) b4
- d) ♙b6

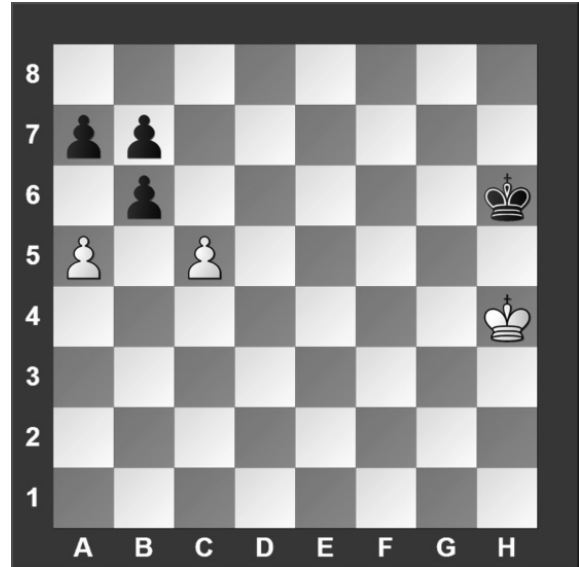
#5. White to move



What is White's best move?

- a)  $\text{Ng6}$
- b)  $\text{Nd5}$
- c)  $\text{Qxb5}$
- d)  $\text{Nc6}$

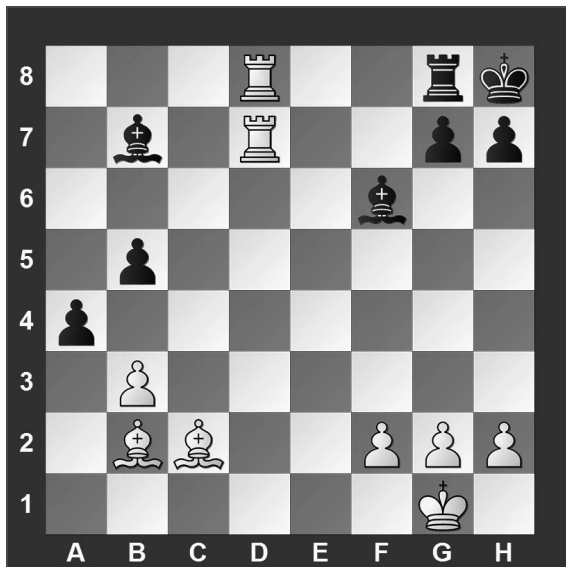
#6. White to move



What is White's best move?

- a)  $\text{c6}$
- b)  $\text{cxb6}$
- c)  $\text{axb6}$
- d)  $\text{a6}$

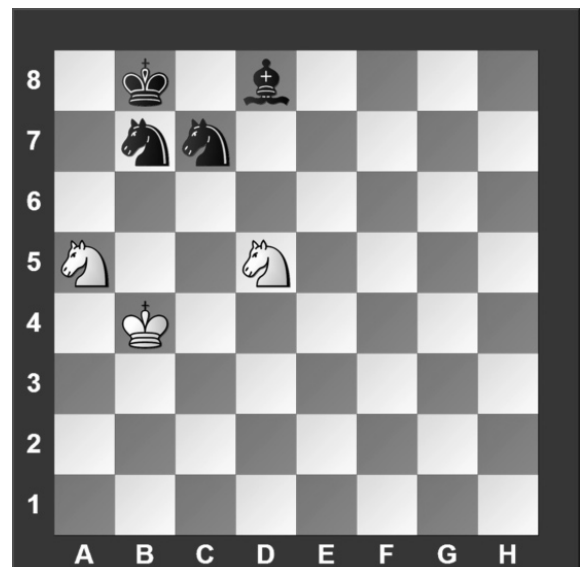
#7. White to move



If White can checkmate Black in two moves, what is White's first move?

- a)  $\text{Rg8}$
- b)  $\text{Rxb7}$
- c)  $\text{Rg7}$
- d)  $\text{Qxf6}$

#8. White to move



With the best play, what is the outcome of the game?

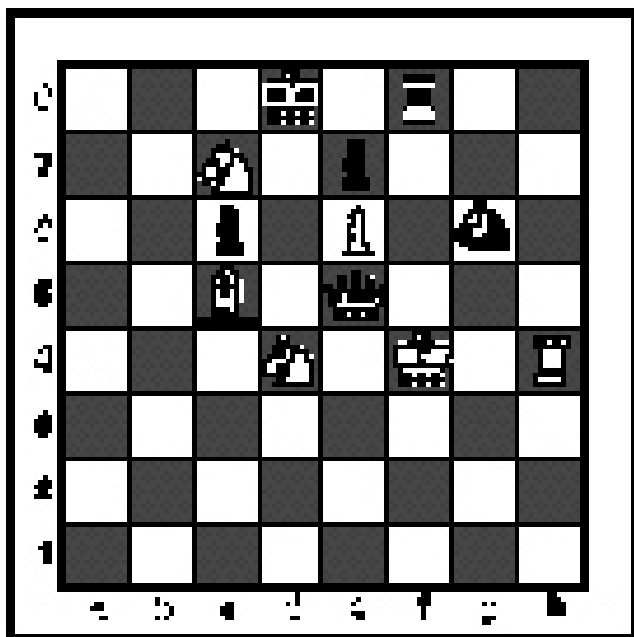
- a) White wins.
- b) Black wins.
- c) Draw.
- d) It is not possible to tell.

**FALL/WINTER DISTRICT 2022-2023**

**A+ ACADEMICS**



University Interscholastic League



# Chess Puzzle Solving

grades 2 & 3

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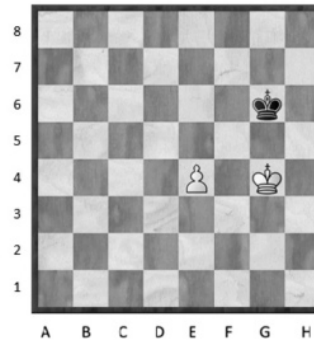


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Queen	
Rook	
Bishop	
Knight	
Pawn	<b>a-h</b> (We write the file it's on.)

- To make them easy to read, the questions on this test use the figurine piece symbols on the right, above.
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At right are two sample moves.

If you look closely at the diagrams in the questions below, you'll see that the frame around the diagram labels the ranks (1-8) and files (a-h) to help you.

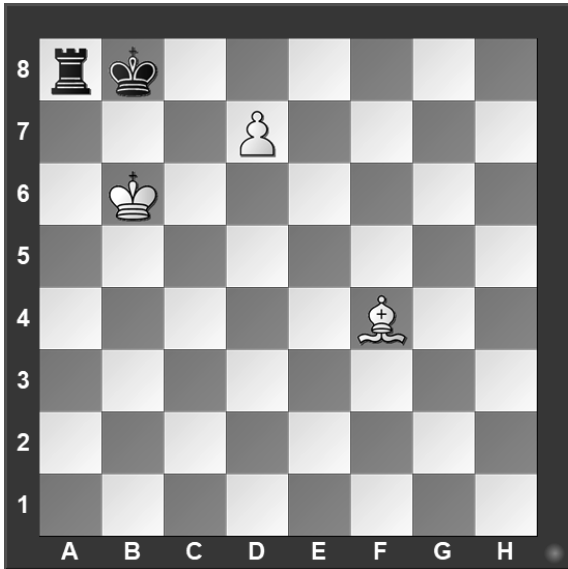


White has just played **e4**.



Black has just played ... **Nf6**.

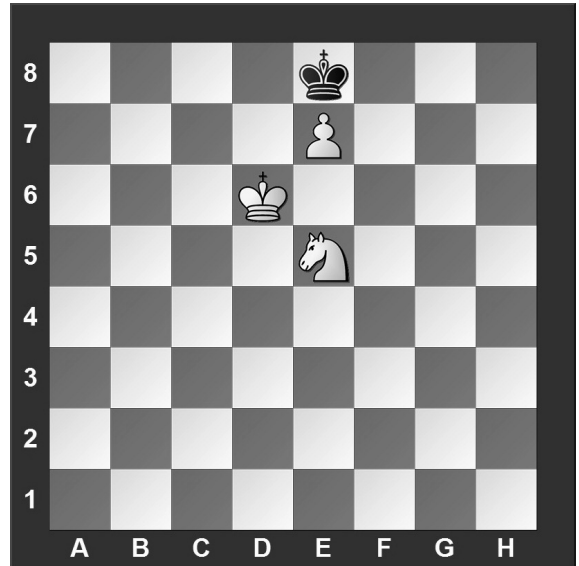
#1. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

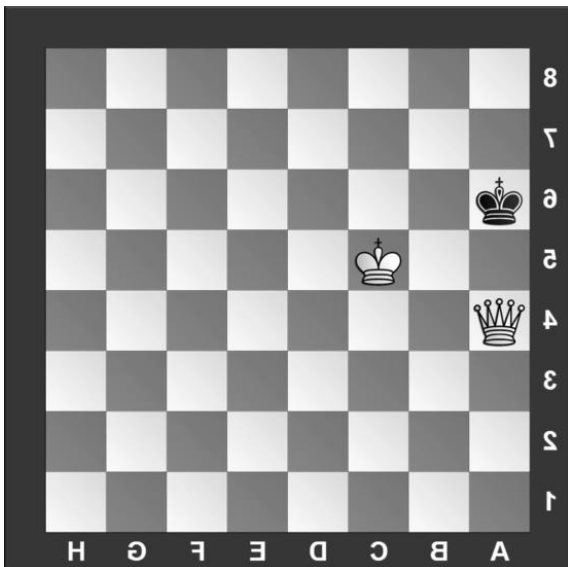
#2. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

#3. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

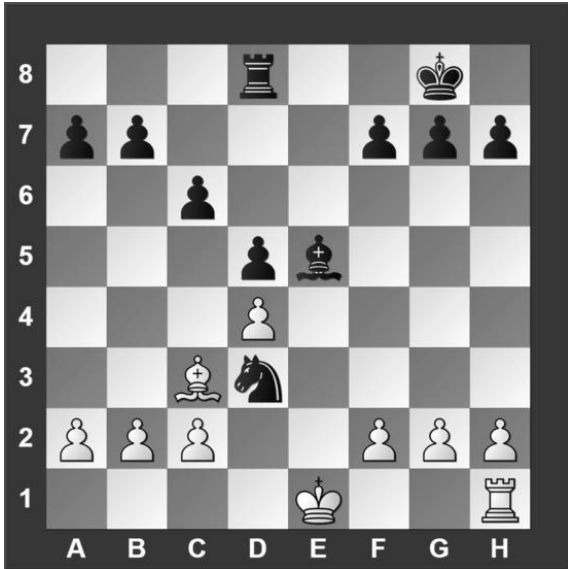
#4. White to move



Which side has material advantage?

- a) White.
- b) Black.
- c) It's even.
- d) It's not possible to tell.

#5. White to move



Which move is possible for White?

- a) Short Castle.
- b) Long Castle.
- c) To capture the bishop.
- d) To capture the knight.

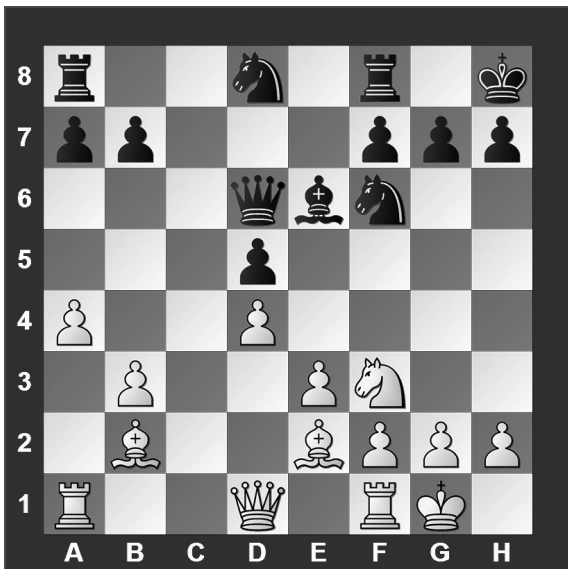
#6. White to move



Black just played d7 to d5. Which pawn can be captured?

- a) Black's c-pawn
- b) Black's d-pawn
- c) Black's f-pawn
- d) White can't capture a pawn.

#7. White to move



What is White's best move?

- a)  $\text{Qa3}$
- b)  $\text{Ne5}$
- c)  $\text{Ng5}$
- d)  $\text{Qc4}$

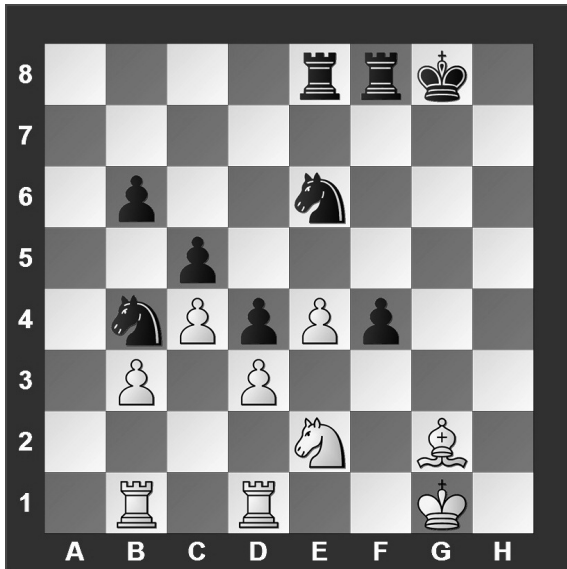
#8. White to move



What piece should White capture?

- a) Queen
- b) Bishop
- c) Knight
- d) pawn

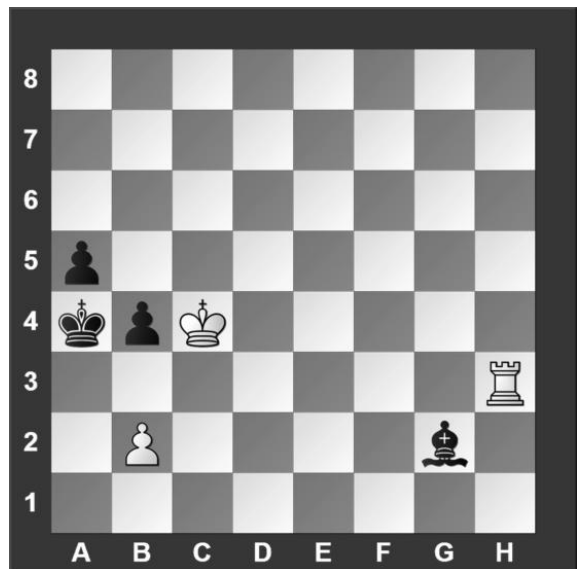
#9. Black to move



What is Black's best move?

- a) ♖×d3
- b) f3
- c) ♖a8
- d) ♗g7

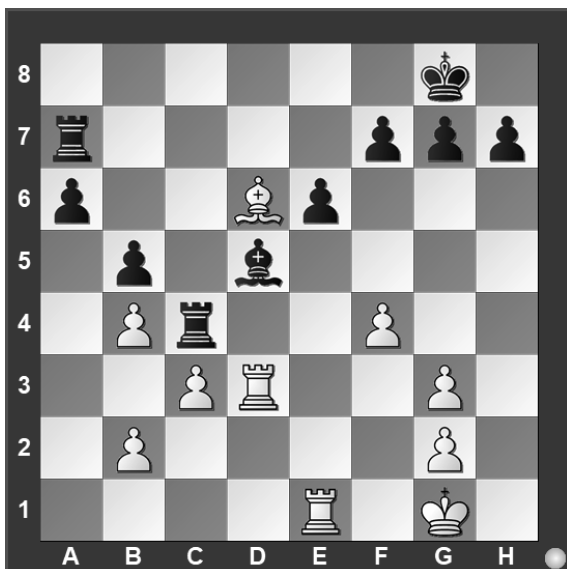
#10. White to move



What is White's best move?

- a) ♖a3
- b) ♖h1
- c) b3
- d) ♖c3

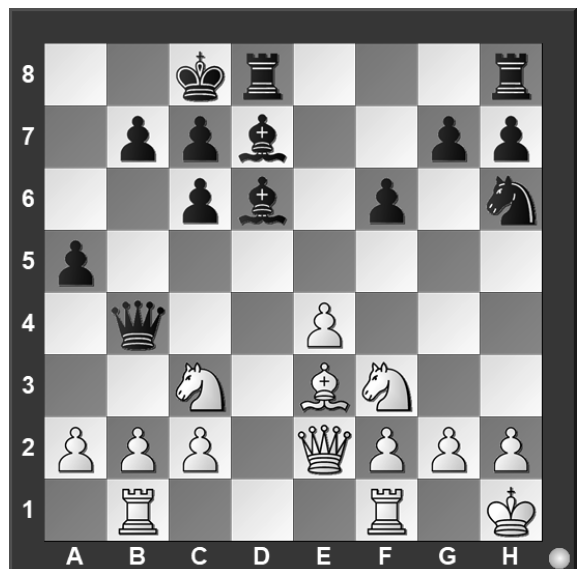
#11. White to move



What is White's best move?

- a) ♖×d5
- b) b3
- c) ♗c5
- d) ♗f2

#12. White to move



What is White's best move?

- a) ♗×h6
- b) a3
- c) e5
- d) ♗d2

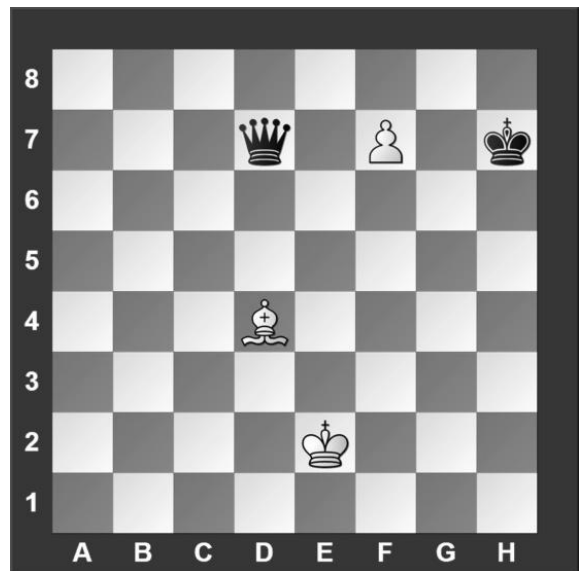
#13. White to move



If White can checkmate Black in two moves, what is the first move?

- a) ♔×e8
- b) ♔×f5
- c) ♔×g7
- d) ♔g8

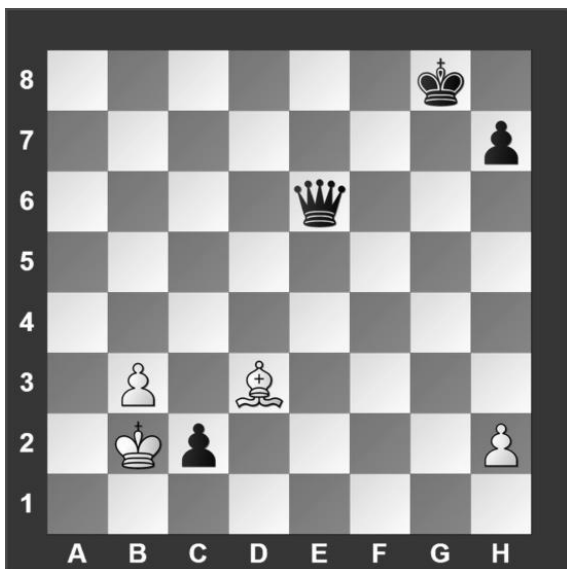
#14. White to move



What piece should White promote to?

- a) Queen
- b) Rook
- c) Knight
- d) Bishop

#15. White to move



What is White's best move?

- a) ♔×c2
- b) ♔c4
- c) ♔×h7
- d) ♔×c2

#16. White to move



What is White's best move?

- a) ♔×f3
- b) g×f3
- c) ♔×h7
- d) b×a4



**University Interscholastic League  
A+ Chess Puzzle Contest  
2022-2023 Fall/Winter — Grades 2 & 3**

**ANSWER KEY**

**Test**

- |       |       |
|-------|-------|
| 1. A  | 11. A |
| 2. B  | 12. B |
| 3. C  | 13. D |
| 4. A  | 14. C |
| 5. D  | 15. B |
| 6. B  | 16. C |
| 7. A  |       |
| 8. A  |       |
| 9. B  |       |
| 10. A |       |

**Tiebreaker**

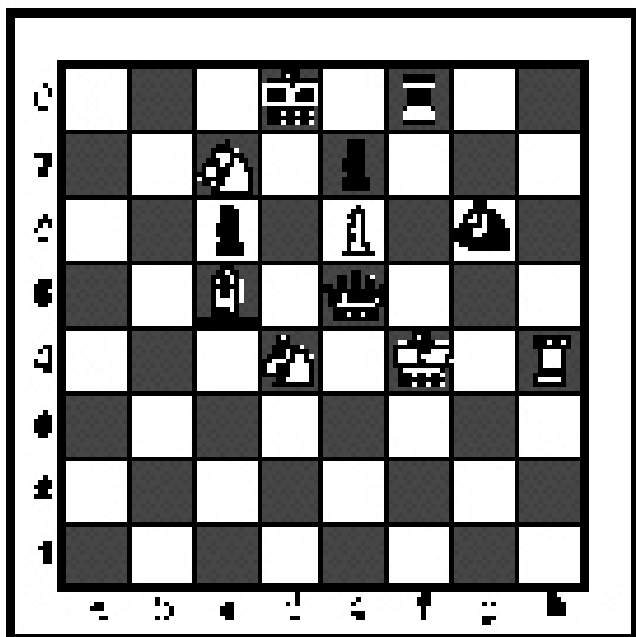
- |      |      |
|------|------|
| 1. B | 5. B |
| 2. C | 6. D |
| 3. C | 7. A |
| 4. C | 8. C |

**FALL/WINTER DISTRICT 2022-2023**

**A+ ACADEMICS**



University Interscholastic League



# Chess Puzzle Solving

grades 4 & 5

**DO NOT OPEN TEST  
UNTIL TOLD TO DO SO**

## How to read and answer questions on this test

- To answer the questions on this test, you'll need to know how to read chess moves. It's simple to do.
- Every square on the board has an "address" made up of a letter and a number.

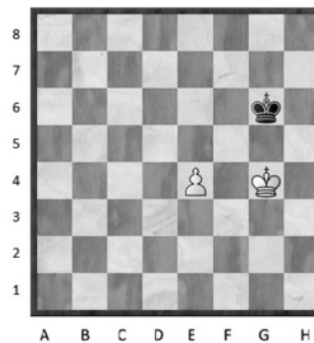


Piece Names	Each chessman can also be represented by a symbol, except for the pawn. (Figurine Notation)
King	
Queen	
Rook	
Bishop	
Knight	
Pawn	<b>a-h</b> (We write the file it's on.)

- To make them easy to read, the questions on this test use the figurine piece symbols on the right, above.
- When answering the puzzle questions, remember that white pawns move "up" the diagrams. Black pawns move "down" the diagrams.

At right are two sample moves.

If you look closely at the diagrams in the questions below, you'll see that the frame around the diagram labels the ranks (1-8) and files (a-h) to help you.



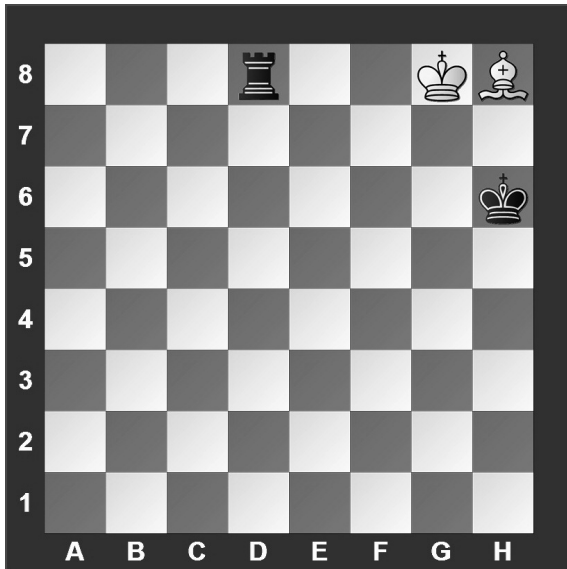
White has just played **e4**.



Black has just played ... **Nf6**.



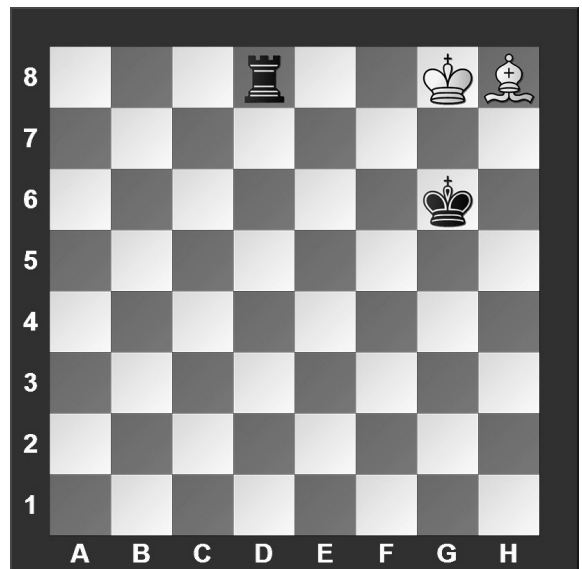
#1. White to move



What term best describes this situation?

- a) White is in checkmate.
- b) White is in stalemate.
- c) White is in check.
- d) None of the above.

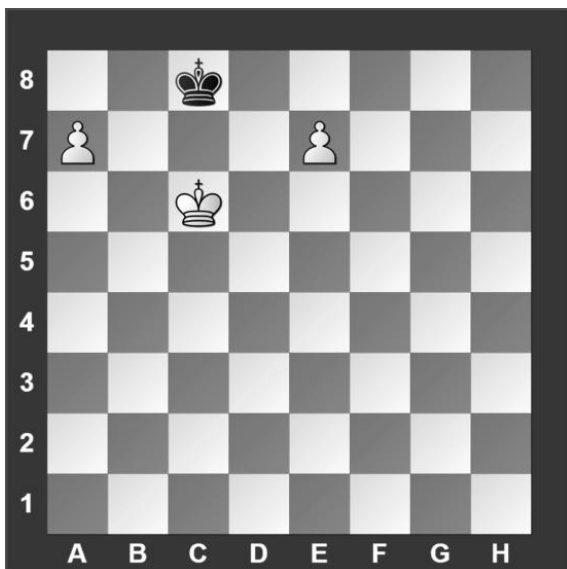
#2. White to move



What term best describes this situation?

- a) White is in checkmate.
- b) White is in stalemate.
- c) White is in check.
- d) None of the above.

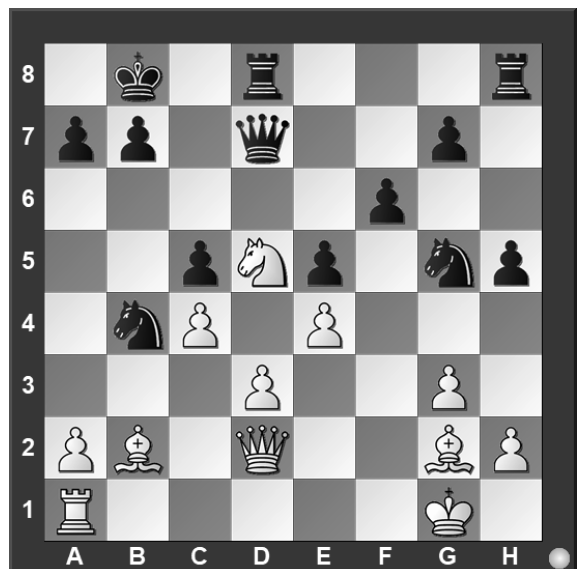
#3. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

#4. White to move



Which side has material advantage?

- a) White.
- b) Black.
- c) It's even.
- d) It's not possible to tell.

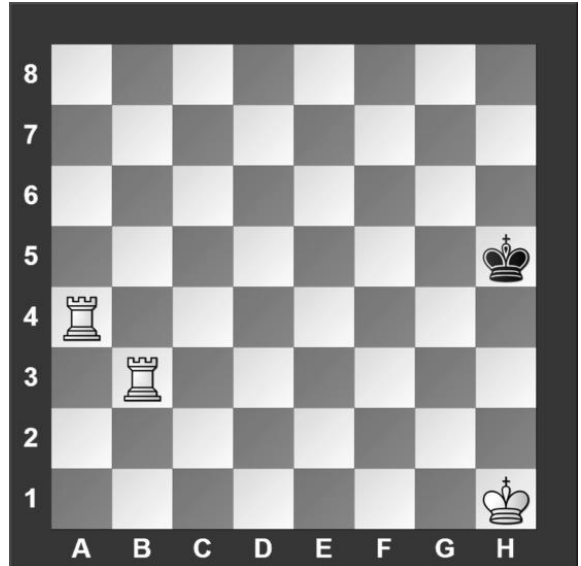
#5. White to move



Which move is possible for White?

- a) Short Castle .
- b) Long Castle.
- c) To capture the bishop.
- d) To capture the knight.

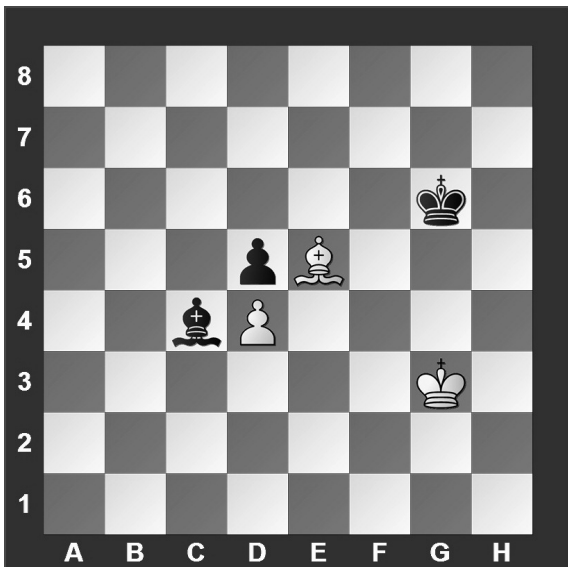
#6. White to move



How many moves does it take to checkmate Black?

- a) 1
- b) 2
- c) 3
- d) 4

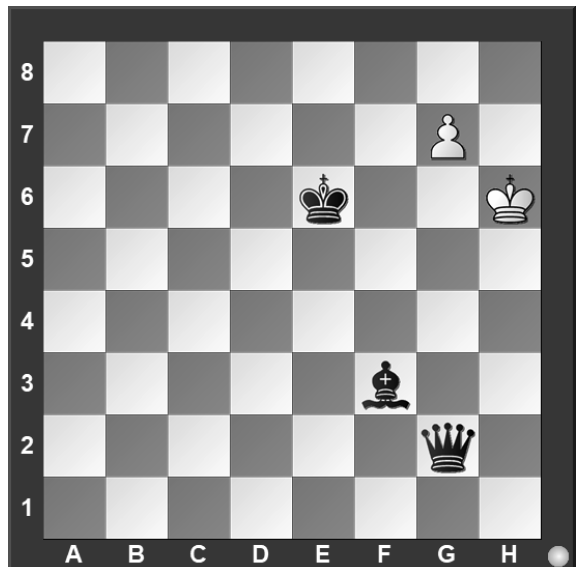
#7. White to move



What is the outcome of the game?

- a) White wins.
- b) Black wins.
- c) Draw.
- d) It is not possible to tell.

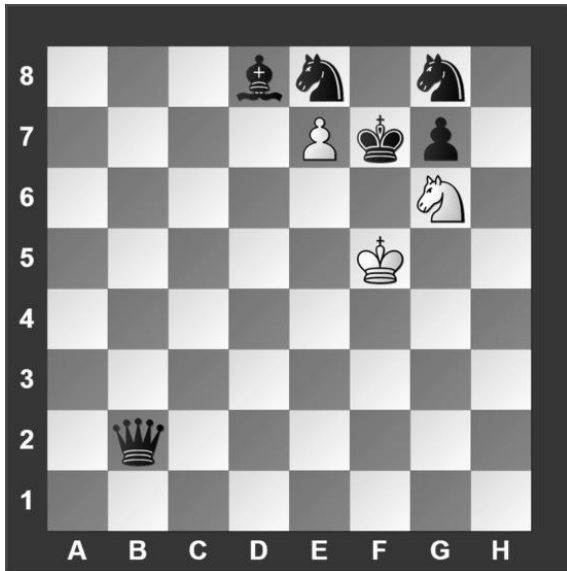
#8. White to move



What piece should White promote to?

- a) Queen
- b) Rook
- c) Bishop
- d) Knight

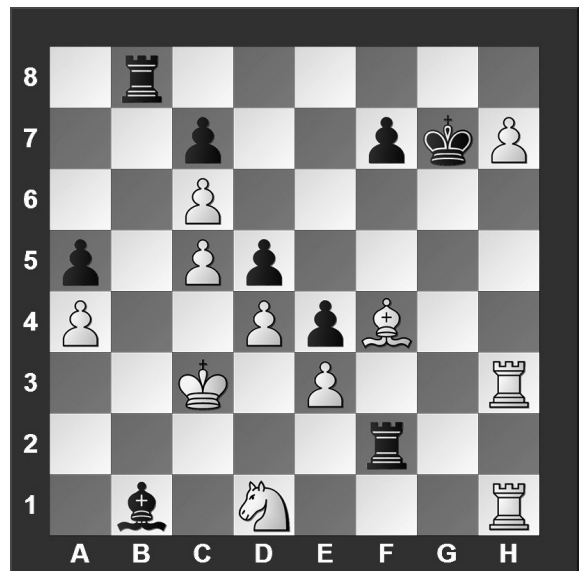
#9. White to move



What piece should White promote to?

- a) Queen
- b) Knight
- c) Rook
- d) White can not promote

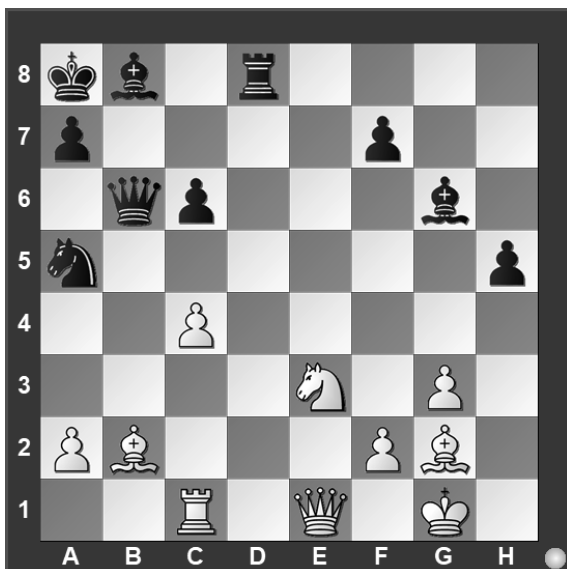
#10. Black to move



What is Black's best move?

- a) ♖b3
- b) ♖c2
- c) ♗h8
- d) ♘c2

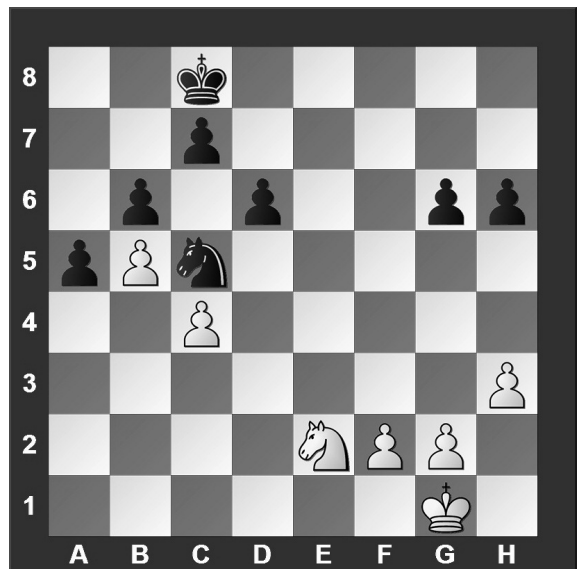
#11. White to move



What is White's best move?

- a) ♔xa5
- b) c5
- c) ♘c3
- d) ♘f6

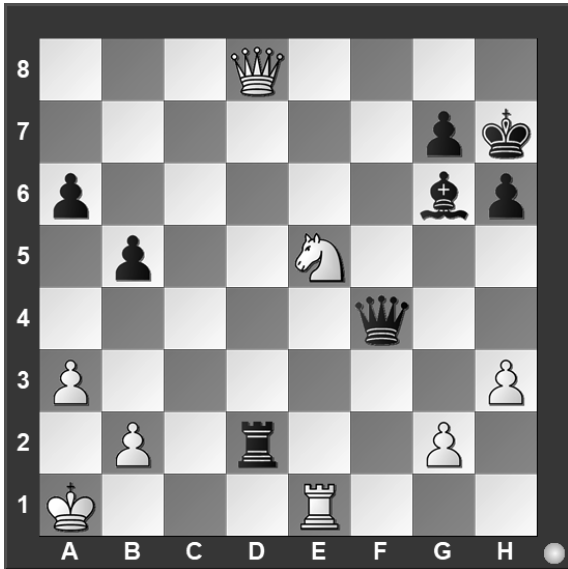
#12. White to move



Black just played a7 to a5. What pawn can be captured?

- a) Black's b-pawn.
- b) Black's a-pawn.
- c) Black's d-pawn.
- d) Black's g-pawn.

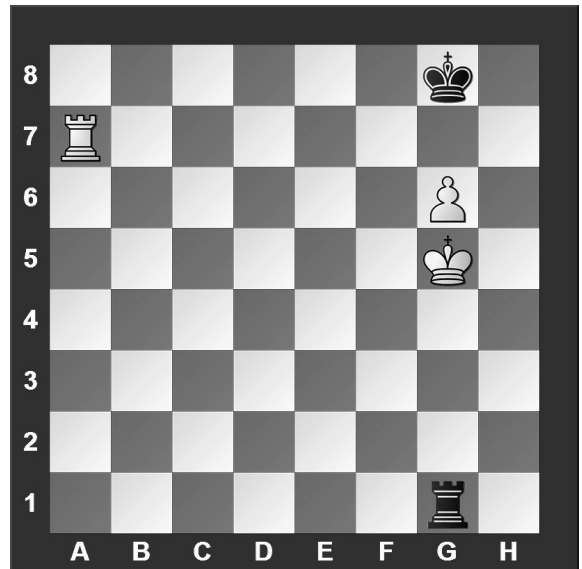
#13. White to move



What is White's best move?

- a) ♖d7
- b) ♔h8
- c) ♖xg6
- d) ♔b6

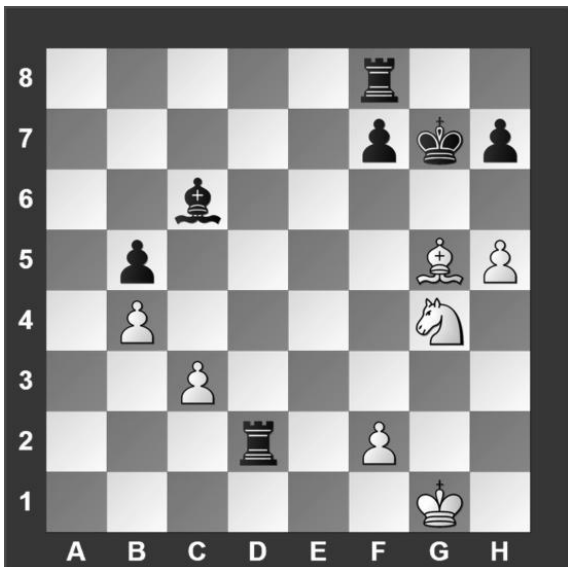
#14. White to move



What is the outcome of the game?

- a) White wins.
- b) Black wins.
- c) Draw.
- d) It is not possible to tell.

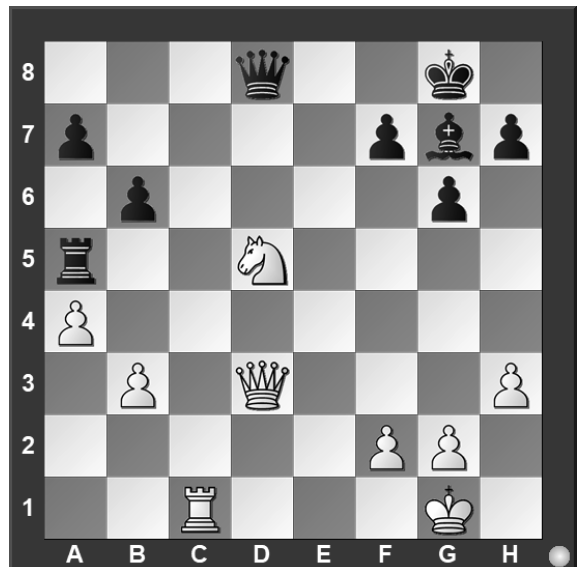
#15. White to move



If White can checkmate Black in two moves, what's the first move?

- a) ♕f6
- b) ♕h6
- c) h6
- d) White can't checkmate Black in two moves.

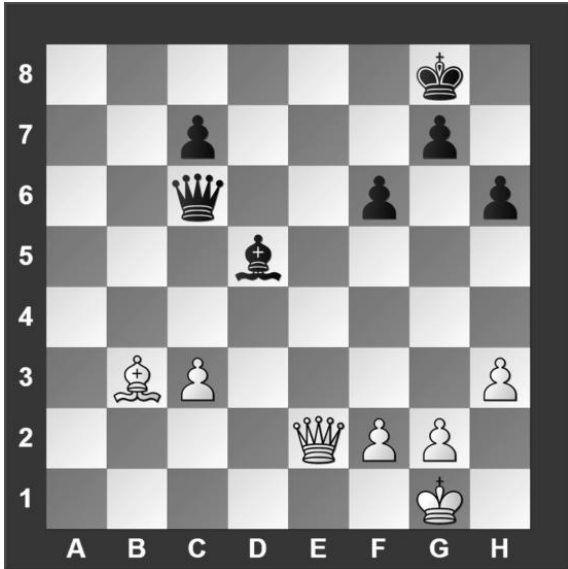
#16. White to move



What is White's best move?

- a) ♖d1
- b) ♖f4
- c) ♖e7
- d) ♖c8

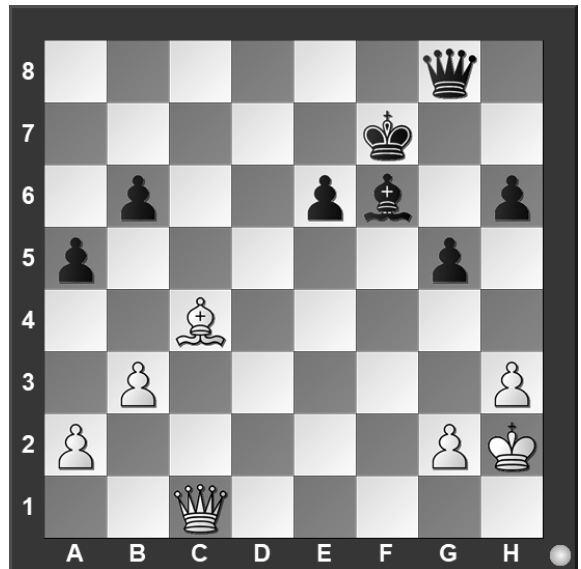
#17. White to move



What is White's best move?

- a) ♔e6
- b) ♔c4
- c) ♕a6
- d) ♕e4

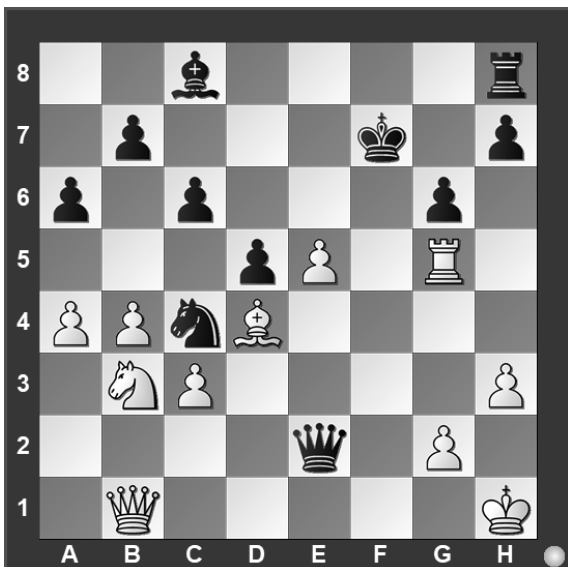
#18. White to move



What is White's best move?

- a) ♔e3
- b) ♕×e6
- c) ♖d2
- d) ♖e1

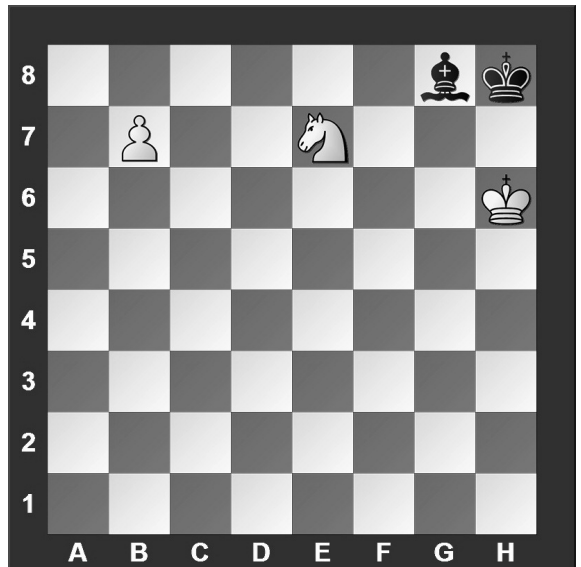
#19. White to move



What is White's best move?

- a) e6
- b) ♖g3
- c) ♗c5
- d) a5

#20. White to move



What piece should White promote to?

- a) Rook.
- b) Queen.
- c) Bishop.
- d) Knight.



**University Interscholastic League  
A+ Chess Puzzle Contest  
2022-2023 Fall/Winter — Grades 4 & 5**

**ANSWER KEY**

**Test**

- |       |       |
|-------|-------|
| 1. C  | 11. A |
| 2. A  | 12. B |
| 3. B  | 13. B |
| 4. B  | 14. C |
| 5. C  | 15. A |
| 6. B  | 16. D |
| 7. C  | 17. D |
| 8. A  | 18. B |
| 9. B  | 19. A |
| 10. B | 20. C |

**Tiebreaker**

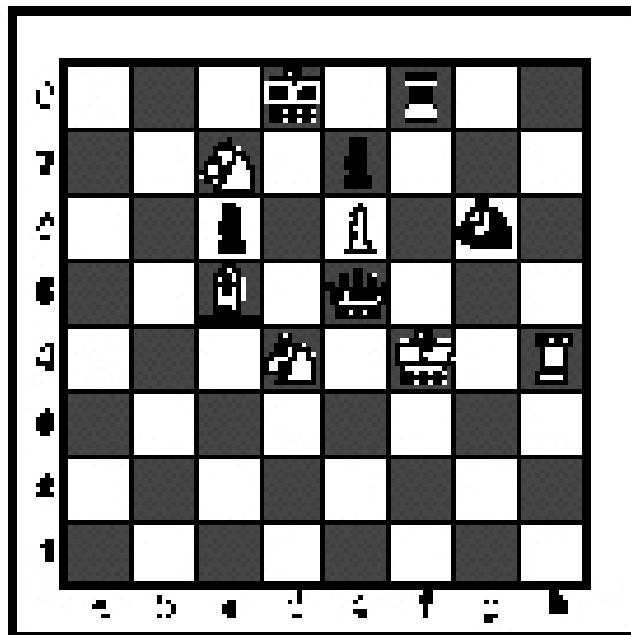
- |      |      |
|------|------|
| 1. B | 5. B |
| 2. C | 6. D |
| 3. C | 7. A |
| 4. C | 8. C |

**FALL/WINTER DISTRICT 2022-2023**

**A+ ACADEMICS**



University Interscholastic League



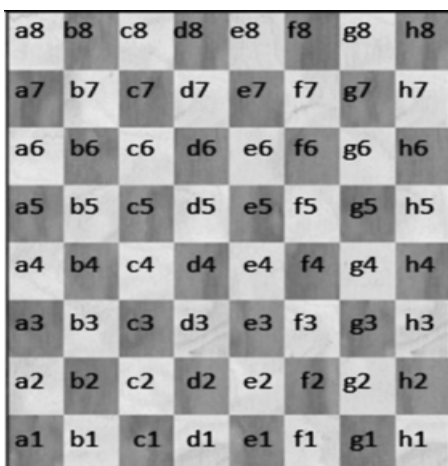
# Chess Puzzle Solving

grades 6, 7, 8

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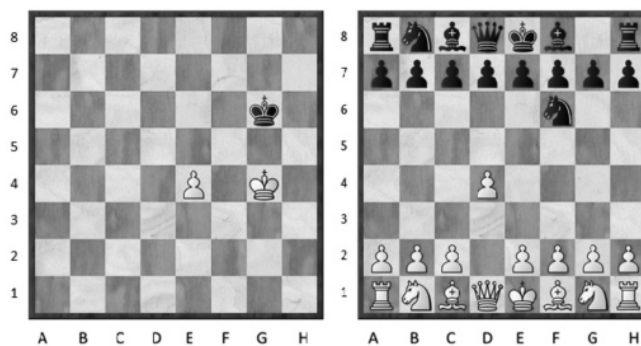


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Queen	
Rook	
Bishop	
Knight	
Pawn	<b>a-h</b> (We write the file it's on.)

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At right are two sample moves.

If you look closely at the diagrams in the questions below, you'll see that the frame around the diagram labels the ranks (1-8) and files (a-h) to help you.

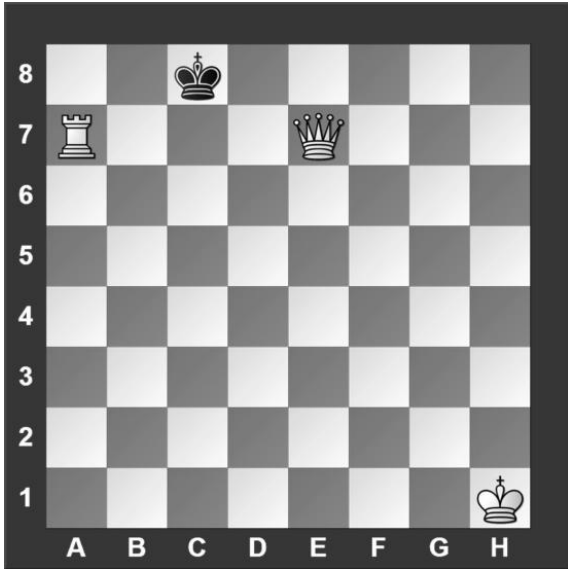


White has just played **e4**.

Black has just played ... **Nf6**.



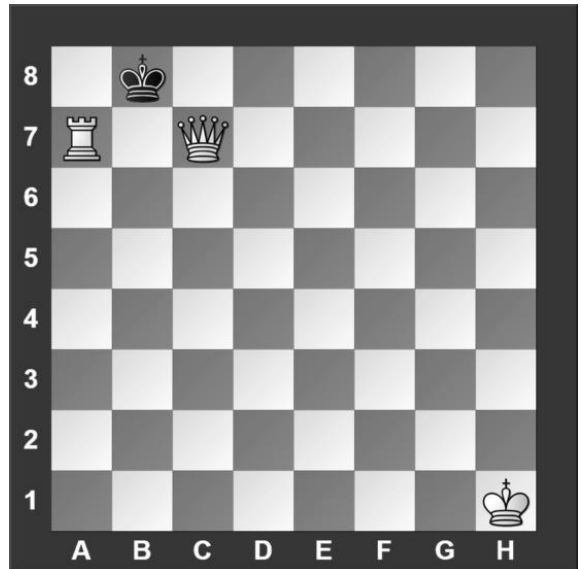
#1. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

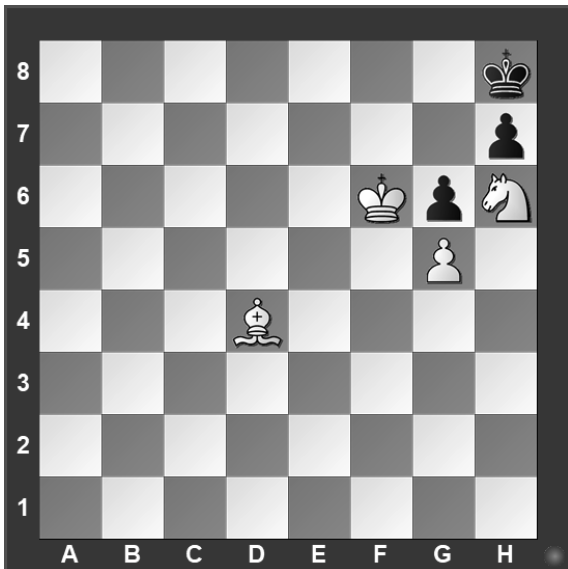
#2. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

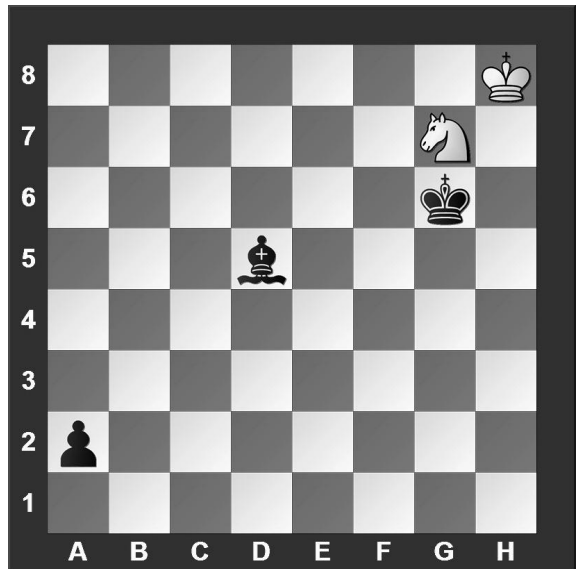
#3. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

#4. Black to move



What piece should Black promote to?

- a) Bishop.
- b) Queen.
- c) Knight.
- d) Rook.

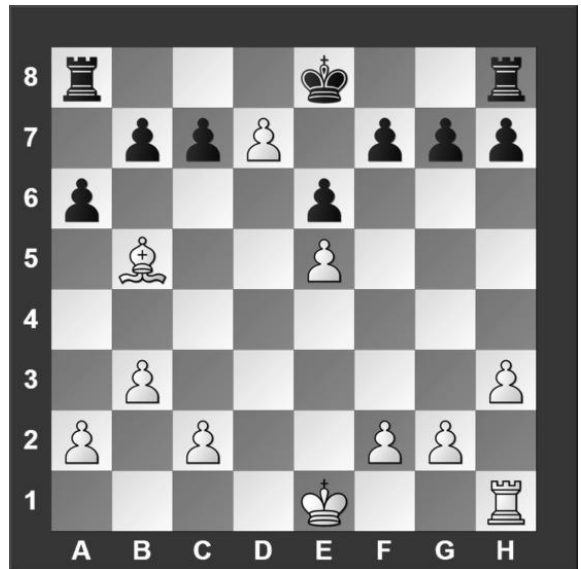
#5. White to move



Which side has material advantage?

- a) White.
- b) Black.
- c) It is even.
- d) It is not possible to tell.

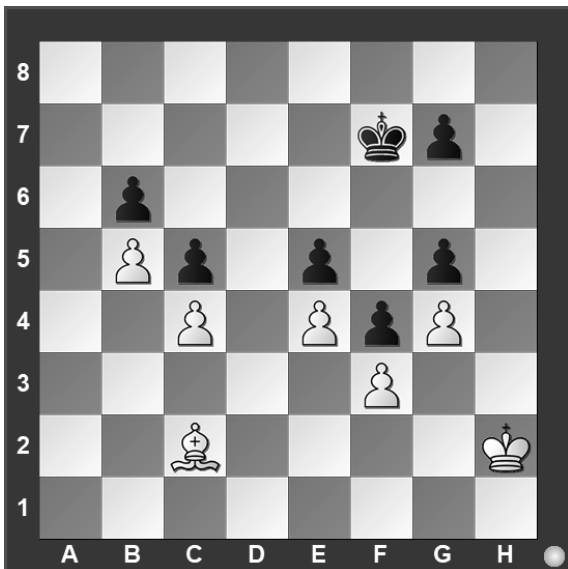
#6. Black to move



Which move is possible for Black?

- a) Short Castle.
- b) Long Castle.
- c) Both A and B.
- d) Neither A or B.

#7. White to move



What is the outcome of the game?

- a) White wins.
- b) Black wins.
- c) Draw.
- d) It is not possible to tell.

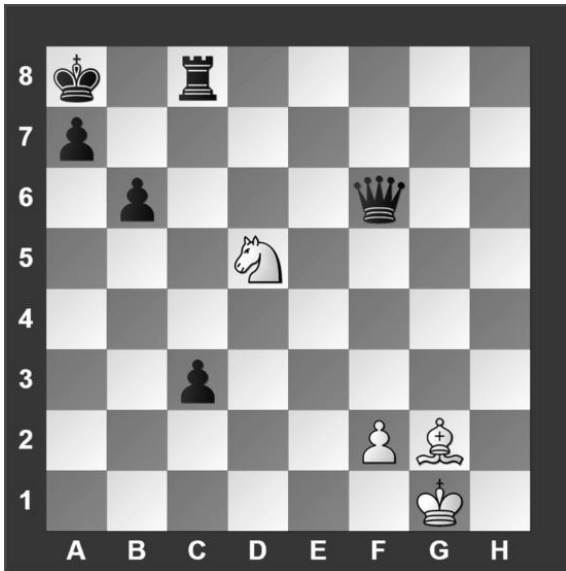
#8. White to move



What is White's best move?

- a) **bxa7**
- b) **bxc7**
- c) **♔xa7**
- d) **b7**

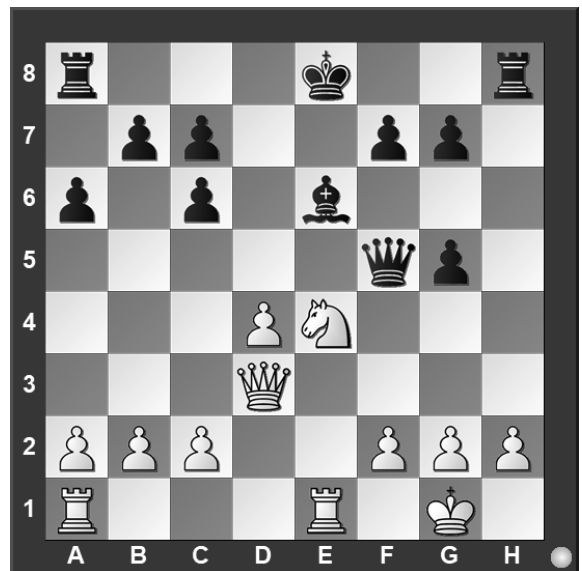
#9. White to move



White can checkmate Black in two moves, what is the *first* move?

- a) ♖xf6
- b) ♖xb6
- c) ♖c7
- d) ♖b4

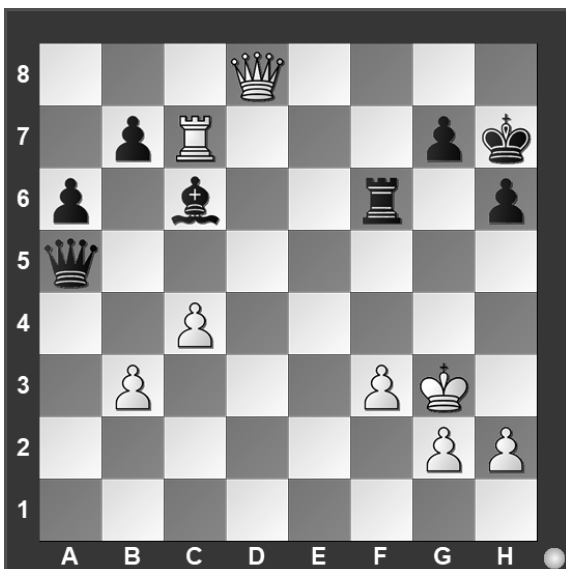
#10. White to move



What is White's best move?

- a) ♖d6
- b) ♖f6
- c) ♕g3
- d) c4

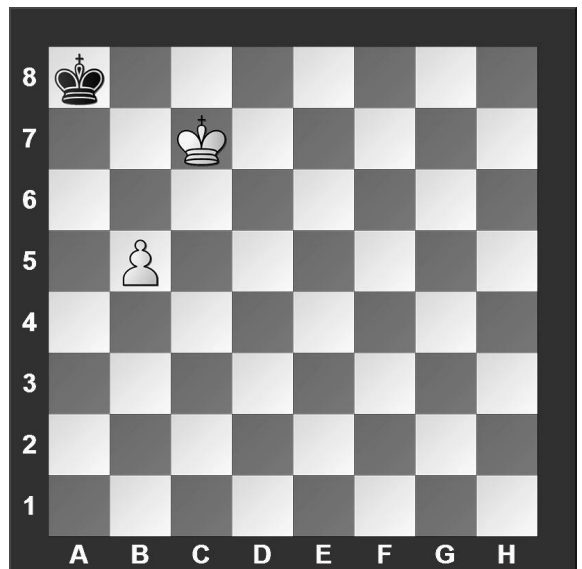
#11. White to move



What is White's best move?

- a) ♕e7
- b) ♕xf6
- c) ♖xg7
- d) ♖c8

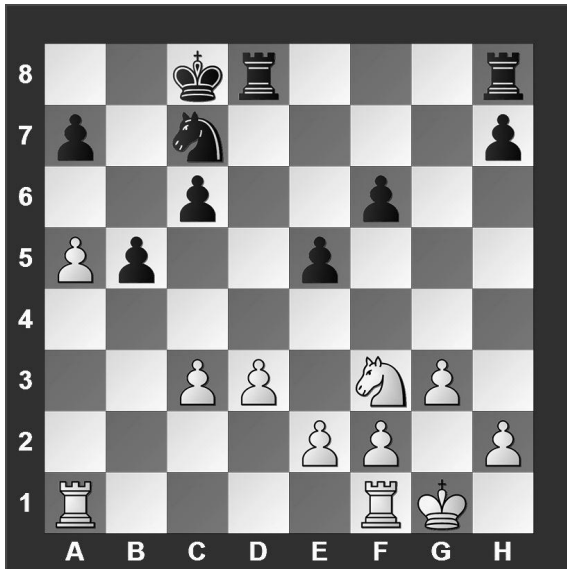
#12. White to move



What is White's best move?

- a) ♖b6
- b) b6
- c) ♖d8
- d) ♖d7

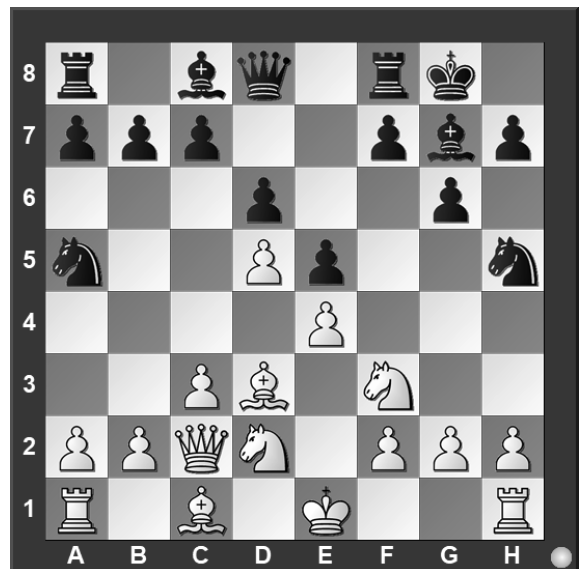
#13. White to move



Black just played b7 to b5. Which pawn can be captured?

- a) Black's a-pawn.
- b) Black's f-pawn.
- c) Black's h-pawn.
- d) Black's b-pawn.

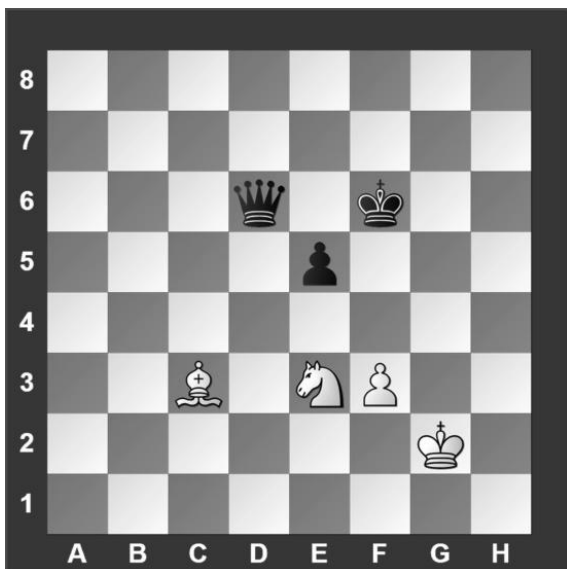
#14. White to move



What is White's best move?

- a) 0-0
- b) g3
- c) ♘c4
- d) b4

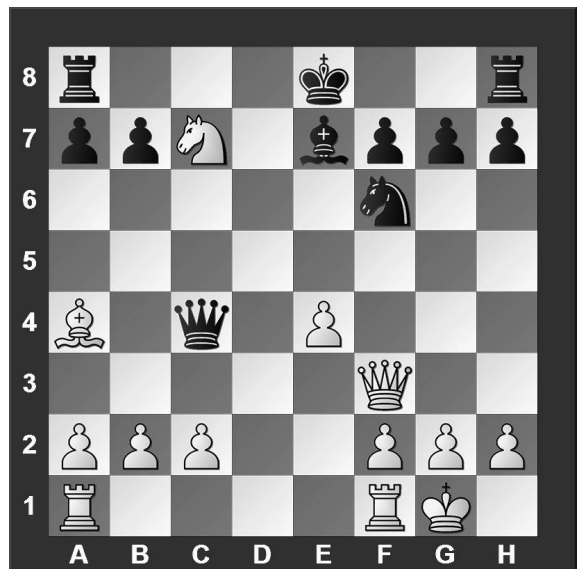
#15. White to move



What is White's best move?

- a) ♘g4
- b) ♙x e5
- c) f4
- d) ♘c4

#16. Black to move



What move below is possible for Black?

- a) Short Castle.
- b) Long Castle.
- c) To capture the bishop.
- d) None of the above.

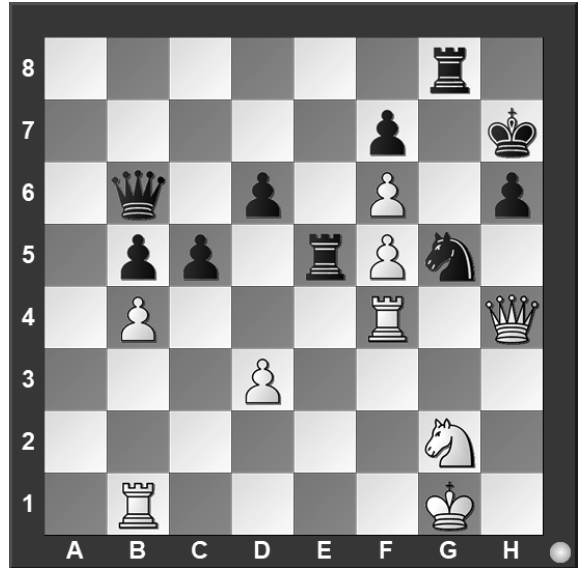
#17. White to move



What is White's best move?

- a) ♖e7
- b) ♖xc8
- c) ♗xf5
- d) a4

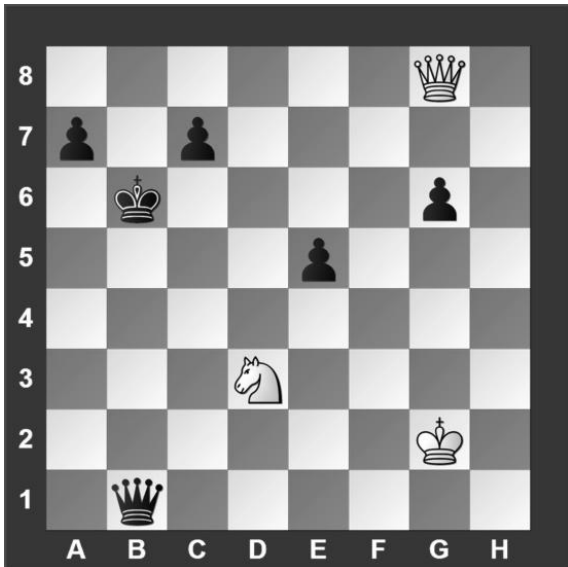
#18. White to move



What is White's best move?

- a) ♔f1
- b) ♗xh6
- c) ♔h2
- d) ♖bf1

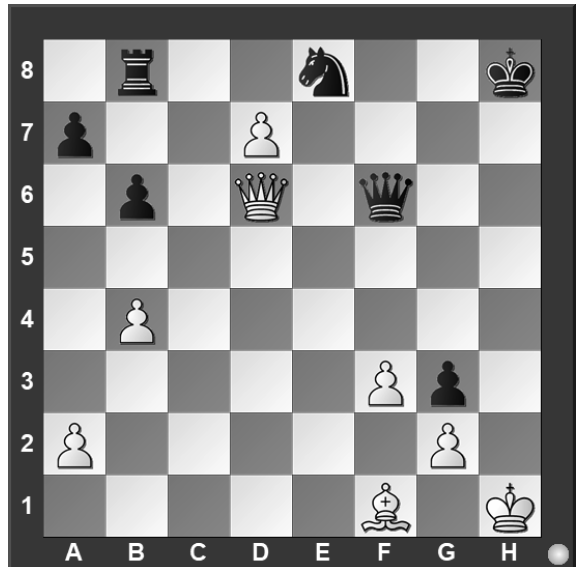
#19. White to move



What is White's best move?

- a) ♗b8
- b) ♗e6
- c) ♗xg6
- d) ♞xe5

#20. White to move



What piece should White capture?

- a) Queen
- b) Rook
- c) Knight
- d) pawn



**University Interscholastic League  
A+ Chess Puzzle Contest  
2022-2023 Fall/Winter — Grades 6, 7, and 8  
ANSWER KEY**

**Test**

- |       |       |
|-------|-------|
| 1. D  | 11. C |
| 2. A  | 12. A |
| 3. B  | 13. D |
| 4. D  | 14. D |
| 5. A  | 15. B |
| 6. D  | 16. D |
| 7. C  | 17. B |
| 8. D  | 18. B |
| 9. C  | 19. A |
| 10. A | 20. C |

**Tiebreaker**

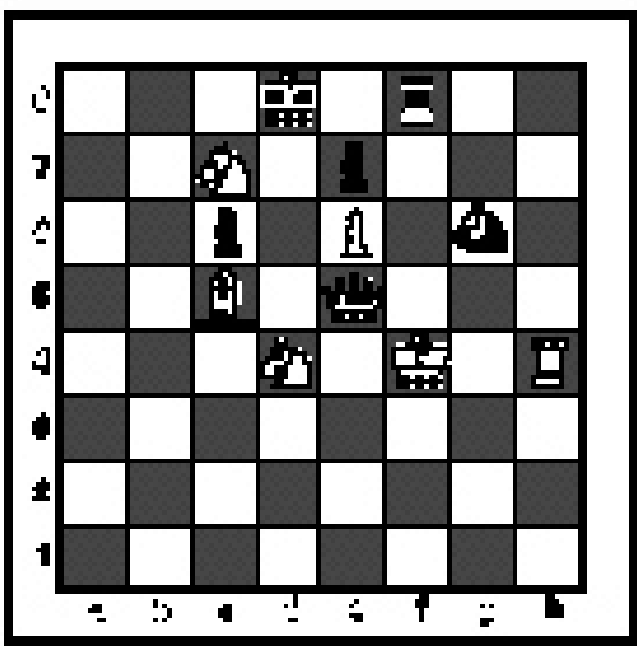
- |      |      |
|------|------|
| 1. B | 5. B |
| 2. C | 6. D |
| 3. C | 7. A |
| 4. C | 8. C |

**FALL/WINTER DISTRICT 2022-2023**

**A+ ACADEMICS**



University Interscholastic League



# Chess Puzzle Solving

## TIEBREAKER - ALL GRADES

**DO NOT OPEN TEST  
UNTIL TOLD TO DO SO**

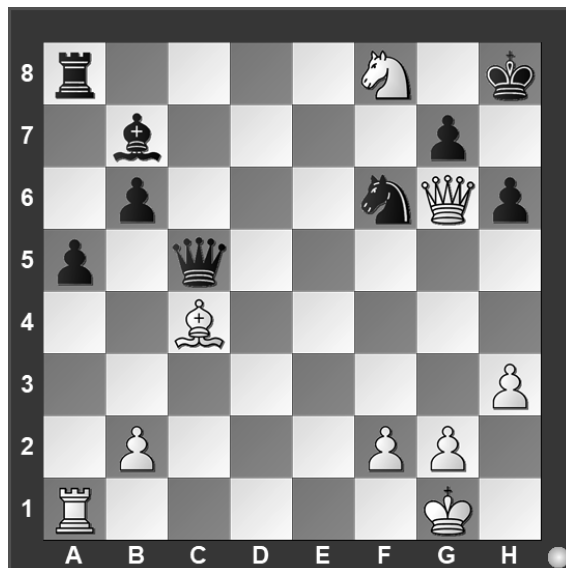
#1. White to move



What is White's best move?

- a)  $\text{Q} \times \text{b}5$
- b)  $\text{a} \times \text{b}5$
- c)  $\text{Q} \times \text{d}5$
- d)  $\text{Q} \text{e}5$

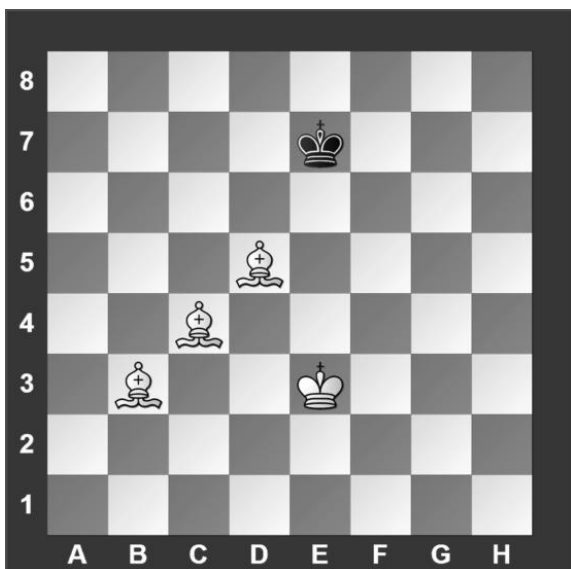
#2. White to move



If White can checkmate Black in two moves, what's the *first* move?

- a)  $\text{Q} \text{e}6$
- b)  $\text{Q} \times \text{g}7$
- c)  $\text{Q} \text{h}7$
- d)  $\text{Q} \text{d}3$

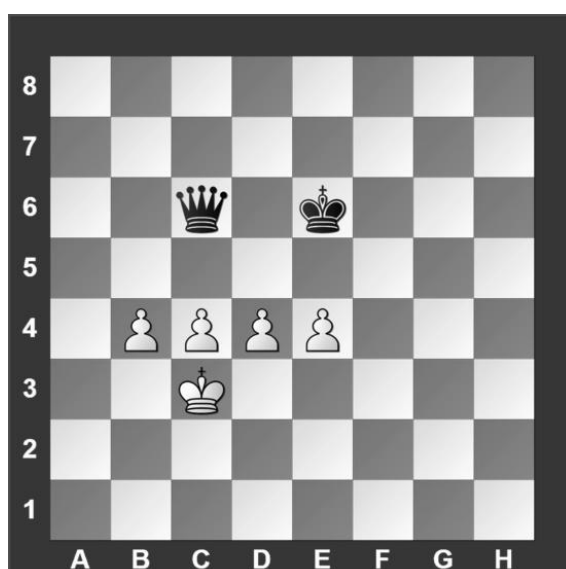
#3. White to move



What should be the outcome of the game?

- a) White wins.
- b) Black wins.
- c) Draw.
- d) It is not possible to tell.

#4. White to move

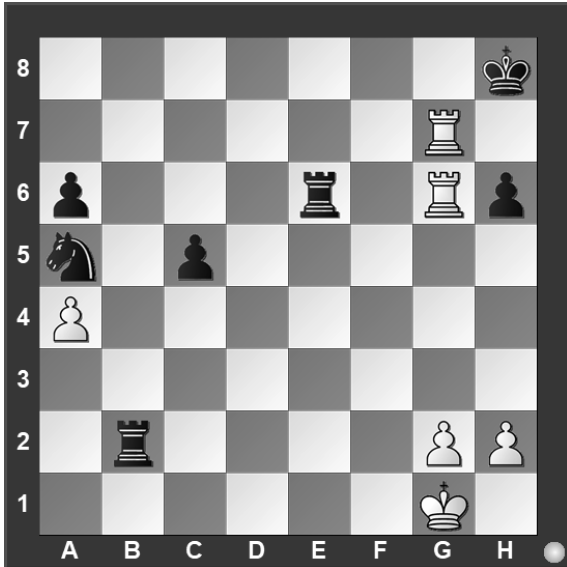


What is White's best move?

- a)  $\text{b}5$
- b)  $\text{c}5$
- c)  $\text{d}5$
- d)  $\text{e}5$



#5. White to move



How many moves does it take to checkmate Black?

- a) 1
- b) 2
- c) 3
- d) There is no checkmate

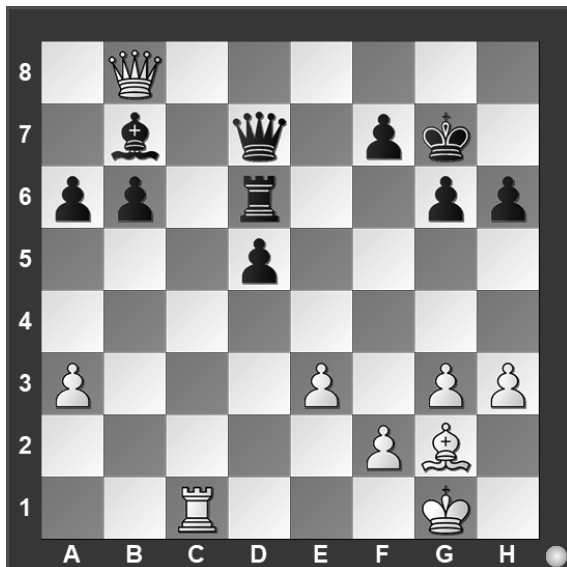
#6. White to move



If White can force checkmate in three moves, what is the last move?

- a) ♖f6
- b) ♖b6
- c) ♖d8
- d) ♖a8

#7. White to move



What is White's best move?

- a) ♖c7
- b) h4
- c) ♖c7
- d) ♕f3

#8. White to move



If White can checkmate Black in two moves, what is White's second move?

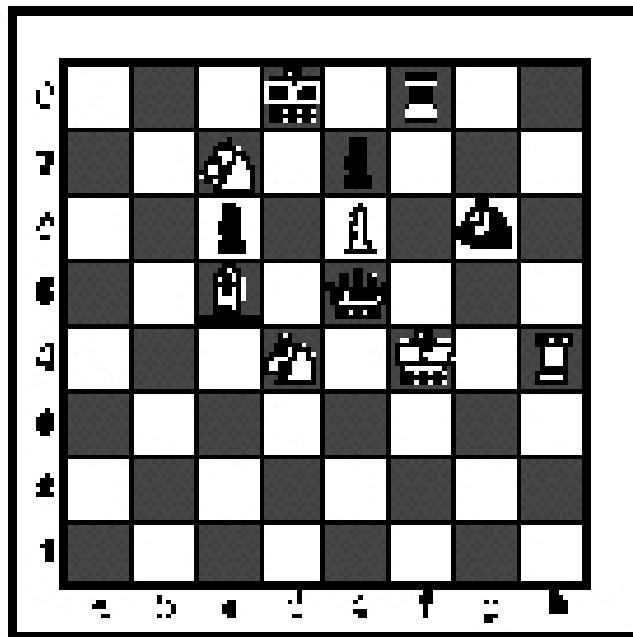
- a) ♖x b7
- b) ♖c7
- c) ♖x c8
- d) ♕x b7

**SPRING DISTRICT 2022-2023**

**A+ ACADEMICS**



University Interscholastic League



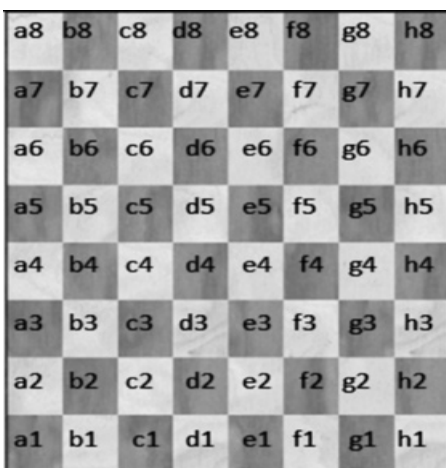
# Chess Puzzle Solving

grades 2 & 3

**DO NOT OPEN TEST  
UNTIL TOLD TO DO SO**

## How to read and answer questions on this test

- To answer the questions on this test, you'll need to know how to read chess moves. It's simple to do.
- Every square on the board has an "address" made up of a letter and a number.

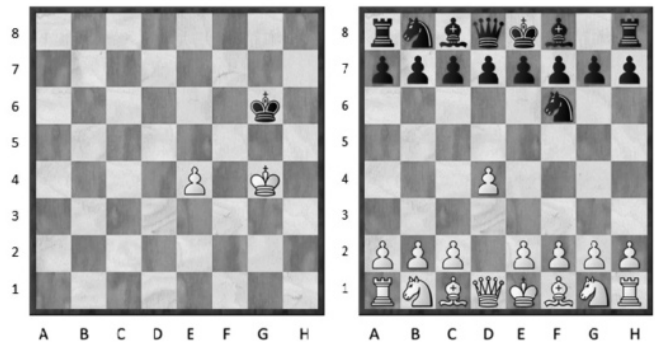


Piece Names	Each chessman can also be represented by a symbol, except for the pawn. (Figurine Notation)
King	
Queen	
Rook	
Bishop	
Knight	
Pawn	<b>a-h</b> (We write the file it's on.)

- To make them easy to read, the questions on this test use the figurine piece symbols on the right, above.
- When answering the puzzle questions, remember that white pawns move "up" the diagrams. Black pawns move "down" the diagrams.

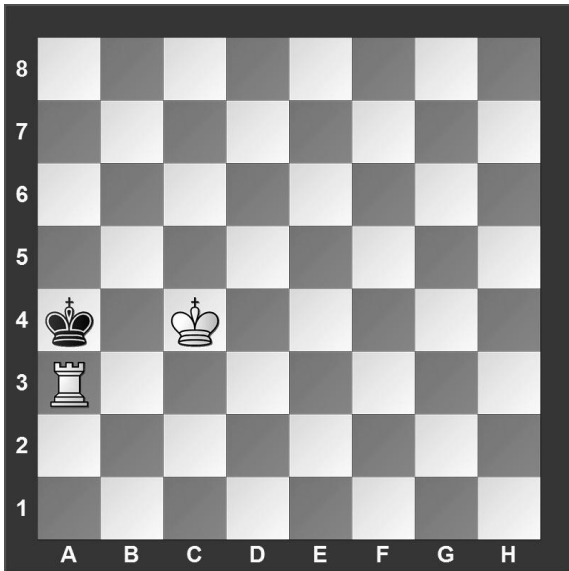
At right are two sample moves.

If you look closely at the diagrams in the questions below, you'll see that the frame around the diagram labels the ranks (1-8) and files (a-h) to help you.



White has just played **e4**. Black has just played ... **f6**

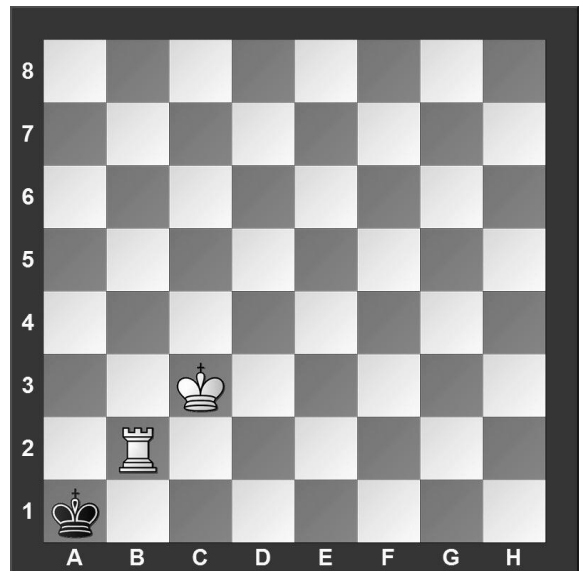
#1. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

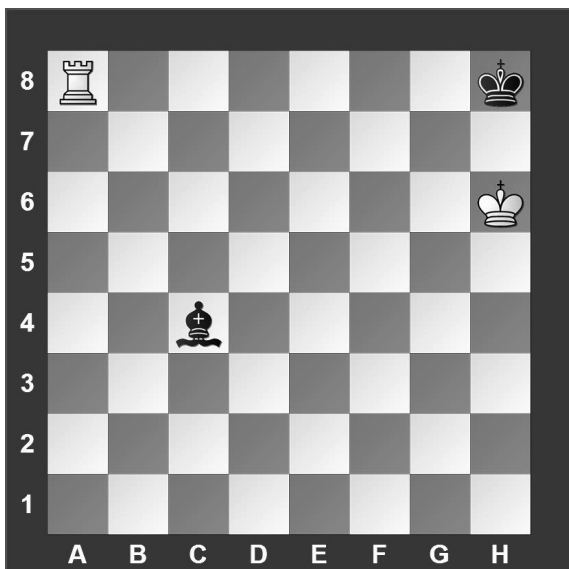
#2. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

#3. Black to move



What term best describes this situation?

- a) Black is in check.
- b) Black is in stalemate.
- c) Black is in checkmate.
- d) None of the above.

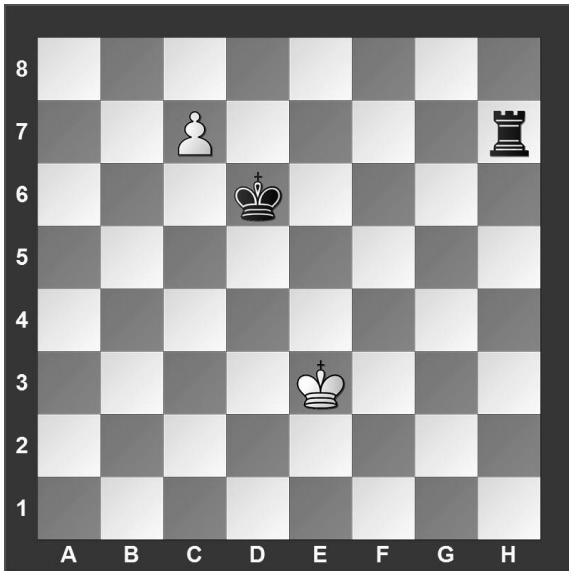
#4.



Which side has material advantage?

- a) White
- b) Black
- c) It's even.
- d) It's not possible to tell without knowing who is to move.

#5. White to move



What piece White should promote to?

- a) Queen.
- b) Knight.
- c) Rook.
- d) Bishop.

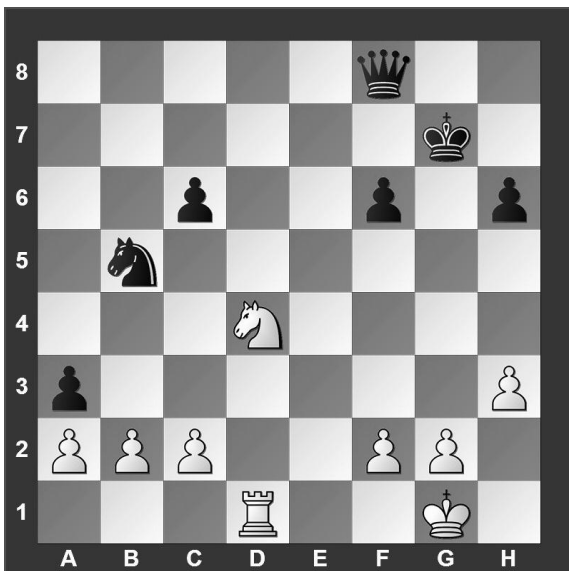
#6. White to move



Black just played b7 to b5. Which pawn can be captured?

- a) Black's c-pawn
- b) Black's b-pawn
- c) Black's f-pawn
- d) White can't capture a pawn.

#7. White to move



What is White's best move?

- a)  $\text{N} \times \text{b5}$
- b)  $\text{N} \times \text{e6}$
- c)  $\text{N} \times \text{f5}$
- d)  $\text{N} \times \text{c6}$

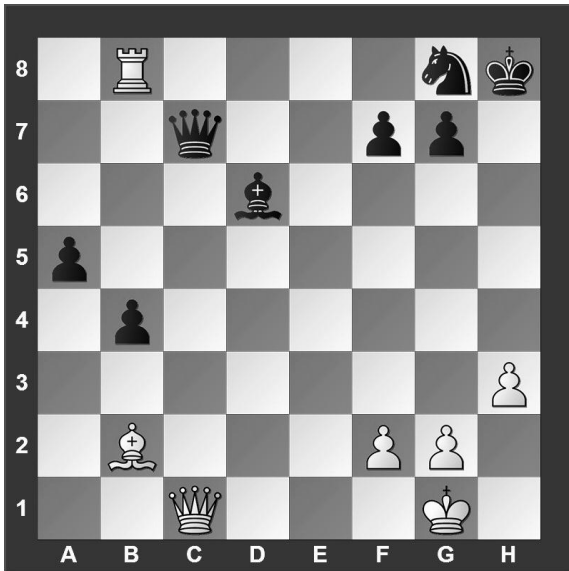
#8. White to move



What piece should White capture?

- a) Black's Queen.
- b) Black's Knight.
- c) Black's Pawn.
- d) Black's Rook.

#9. White to move



What is White's best move?

- a) ♔xc7
- b) ♖xg7
- c) ♖xg8
- d) ♔h6

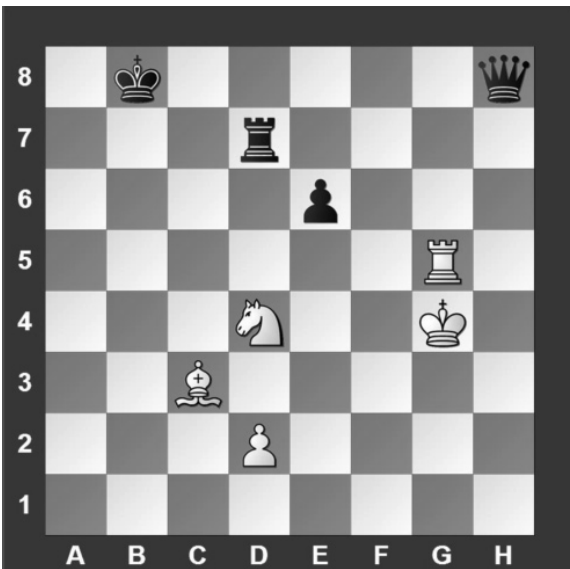
#10. White to move



What piece should White promote to?

- a) Queen
- b) Rook
- c) Knight
- d) Bishop

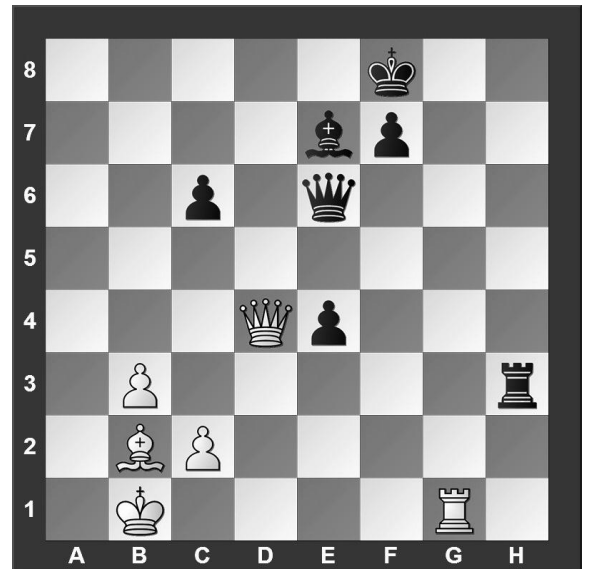
#11. White to move



What is White's best move?

- a) ♖g8
- b) ♘c6
- c) ♖b5
- d) ♘xe6

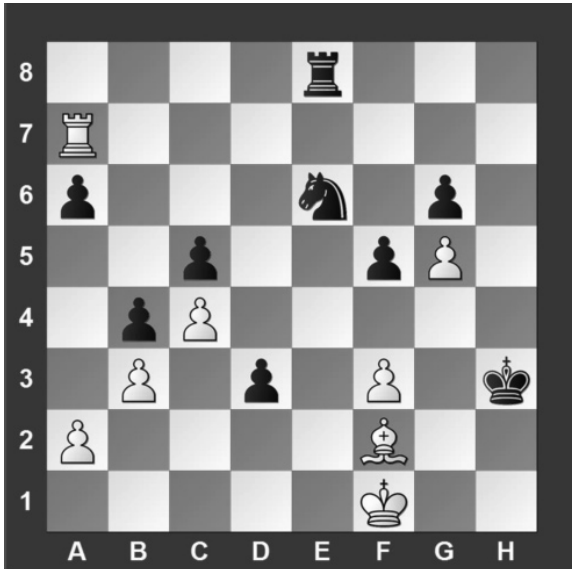
#12. White to move



If White can checkmate Black in two moves, what is the first move?

- a) ♖g8
- b) ♔d8
- c) ♔h8
- d) ♔g7

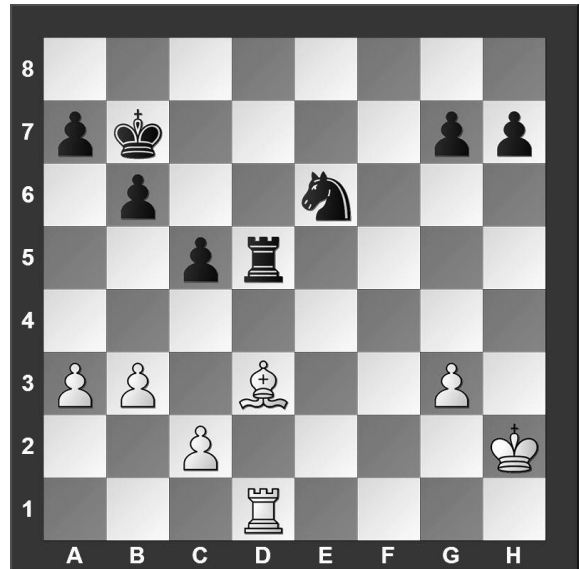
#13. White to move



What is White's best move?

- a) ♖×a6
- b) ♕g1
- c) ♖h7
- d) f4

#14. White to move



What is White's best move?

- a) ♔a6
- b) ♔×h7
- c) ♔e4
- d) ♕g1

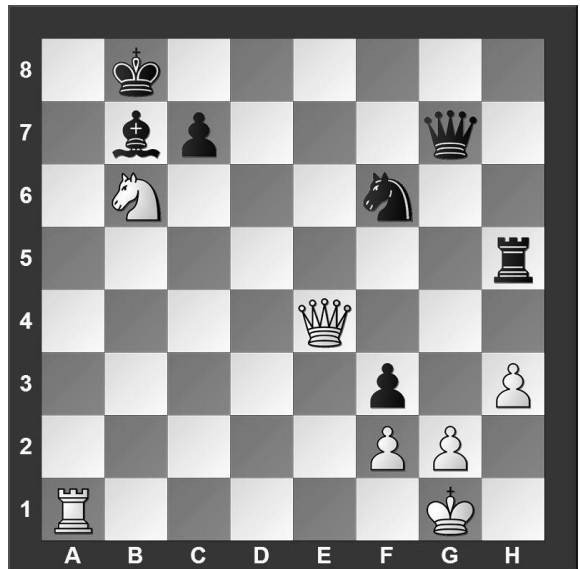
#15. White to move



What is White's best move?

- a) ♘×d6
- b) ♙×d6
- c) c4
- d) ♘c7

#16. White to move



If White can checkmate Black in two moves, what is the first move

- a) ♔e8
- b) ♘d7
- c) ♙×b7
- d) ♖a8



**University Interscholastic League  
A+ Chess Puzzle Contest  
2022-2023 Spring — Grades 2 & 3**

**ANSWER KEY**

**Test**

- |       |       |
|-------|-------|
| 1. C  | 11. B |
| 2. B  | 12. A |
| 3. A  | 13. C |
| 4. B  | 14. C |
| 5. A  | 15. D |
| 6. B  | 16. D |
| 7. B  |       |
| 8. A  |       |
| 9. D  |       |
| 10. A |       |

**Tiebreaker**

- |      |      |
|------|------|
| 1. C | 5. A |
| 2. D | 6. C |
| 3. C | 7. D |
| 4. C | 8. B |

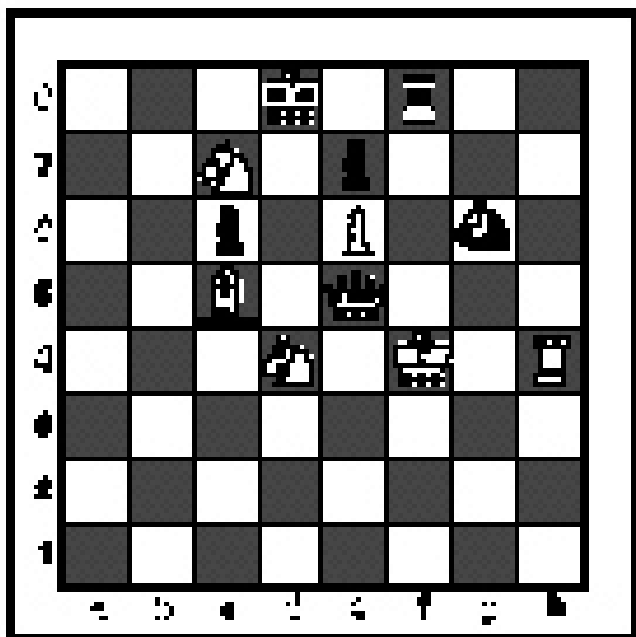


**SPRING DISTRICT 2022-2023**

**A+ ACADEMICS**



University Interscholastic League



# Chess Puzzle Solving

grades 4 & 5

**DO NOT OPEN TEST  
UNTIL TOLD TO DO SO**

## How to read and answer questions on this test

- To answer the questions on this test, you'll need to know how to read chess moves. It's simple to do.
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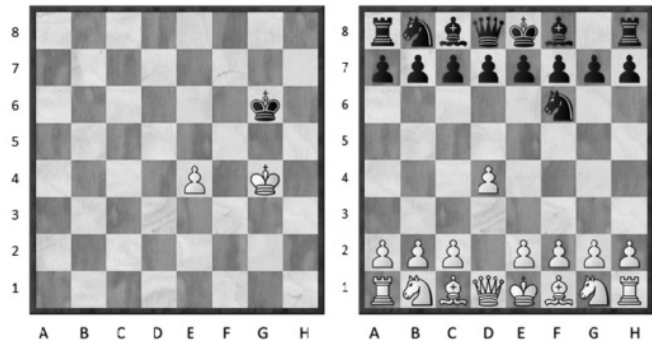


Piece Names	Each chessman can also be represented by a symbol, except for the pawn. (Figurine Notation)
King	
Queen	
Rook	
Bishop	
Knight	
Pawn	<b>a-h</b> (We write the file it's on.)

- To make them easy to read, the questions on this test use the figurine piece symbols on the right, above.
- When answering the puzzle questions, remember that white pawns move "up" the diagrams. Black pawns move "down" the diagrams.

At right are two sample moves.

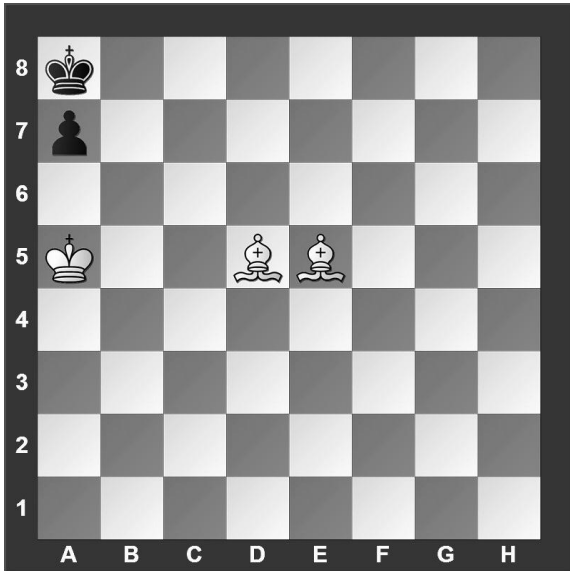
If you look closely at the diagrams in the questions below, you'll see that the frame around the diagram labels the ranks (1-8) and files (a-h) to help you.



White has just played **e4**.

Black has just

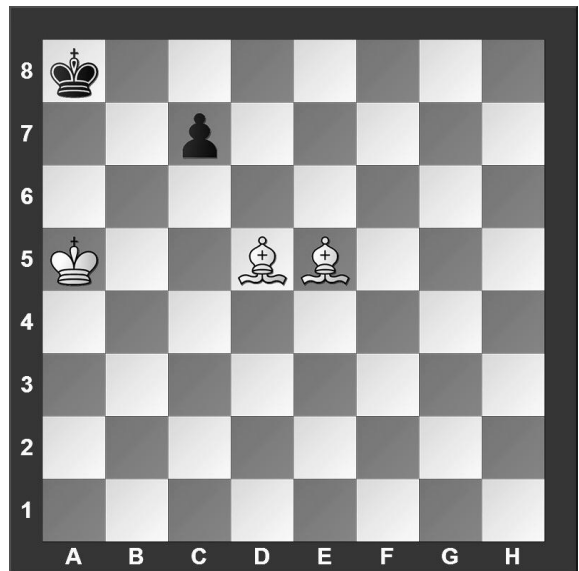
#1. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

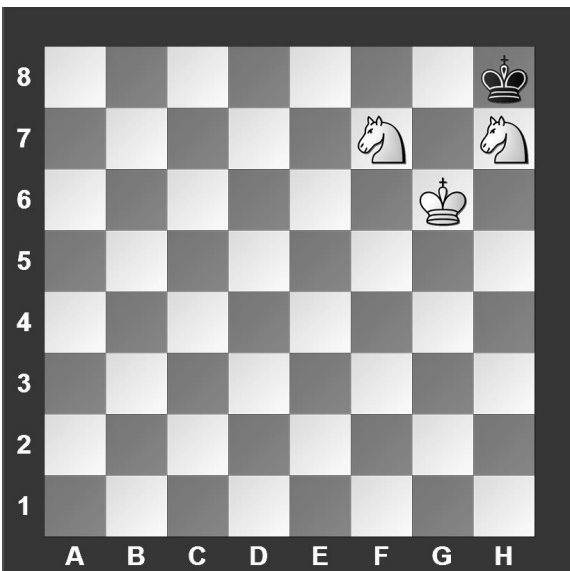
#2. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

#3. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

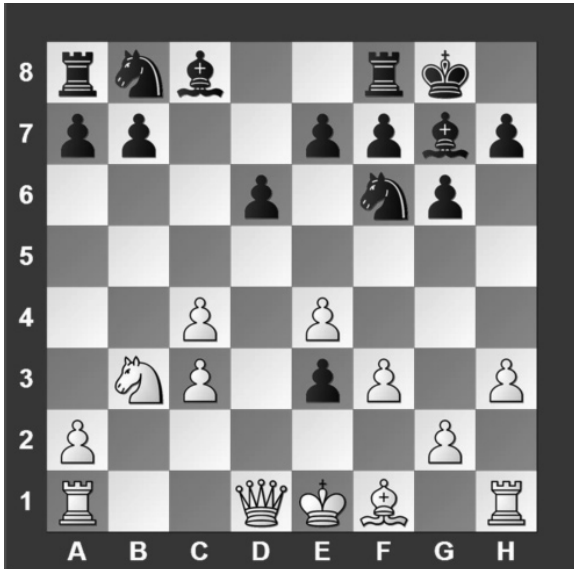
#4. White to move



Black just played c7 to c5. Which pawn can be captured?

- a) Black's b-pawn
- b) Black's d-pawn
- c) Black's c-pawn
- d) All of the above

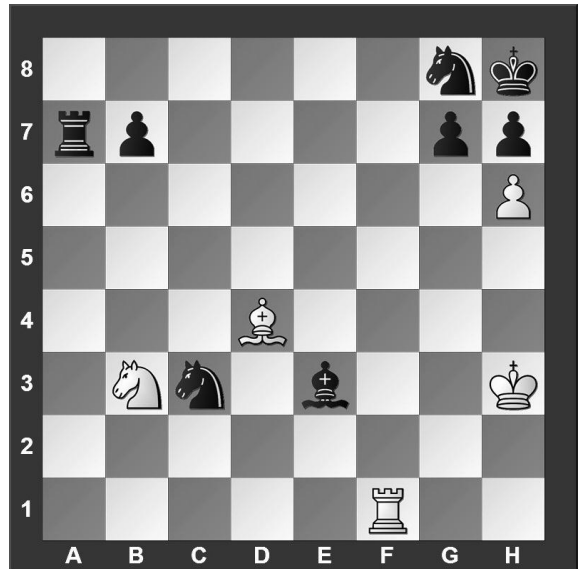
#5.



Which side has material advantage?

- a) White
- b) It is even.
- c) Black
- d) It is not possible to tell.

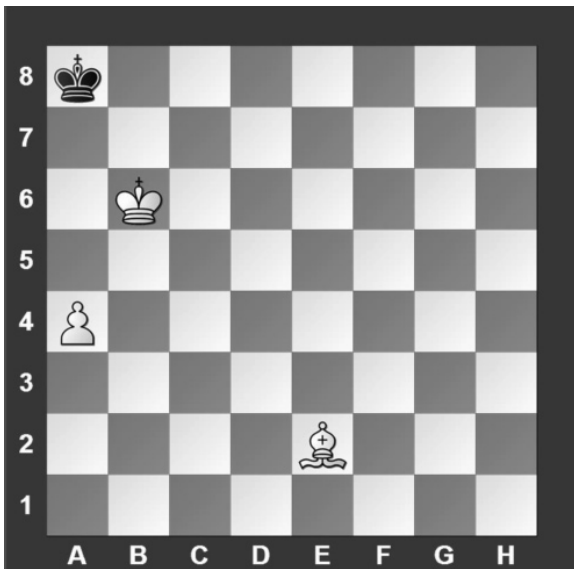
#6. White to move



Which piece White should capture?

- a) Rook.
- b) Knight.
- c) Pawn.
- d) Bishop.

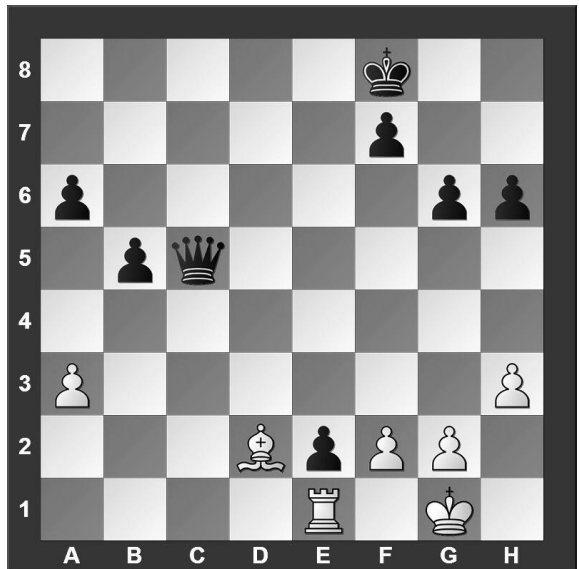
#7. White to move



With the best play, what is the outcome of the game?

- a) White wins
- b) Black wins
- c) Draw
- d) Impossible to tell

#8. White to move



What is White's best move?

- a) ♖×e2
- b) ♕×h6
- c) ♕b4
- d) a4

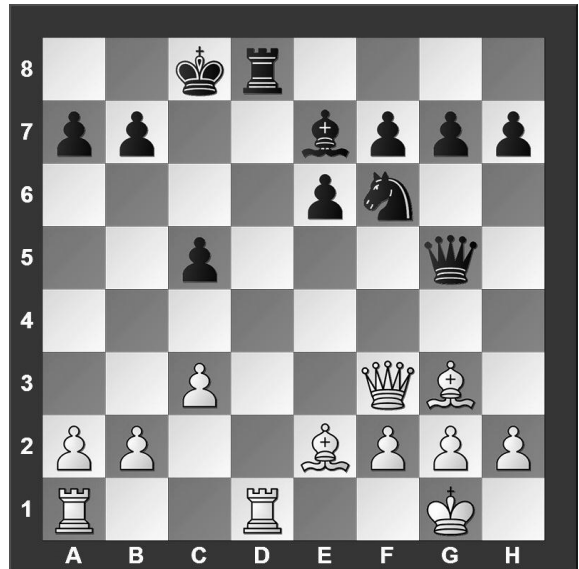
#9. White to move



White can checkmate Black in two moves, what's the *first* move?

- a)  $f \times g6$
- b)  $\text{Re}3$
- c)  $\text{R} \times g6$
- d)  $\text{Ng}5$

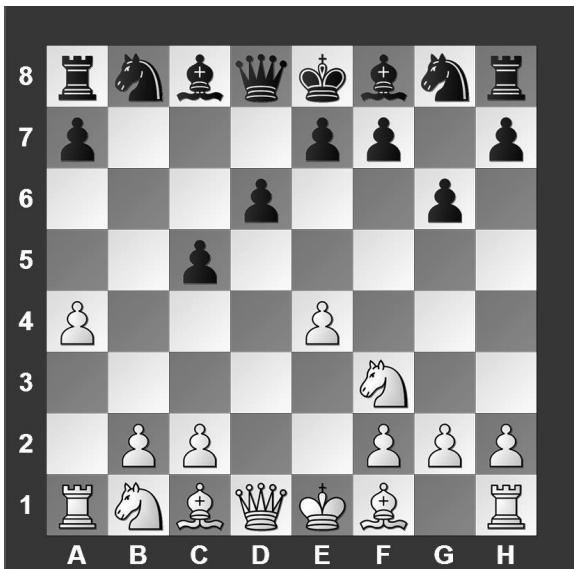
#10. White to move



If White can checkmate Black in two moves, what is the *first* move?

- a)  $\text{Qa}6$
- b)  $\text{Qc}6$
- c)  $\text{R} \times d8$
- d)  $\text{Q} \times f6$

#11. White to move



What is White's best move?

- a)  $\text{Qb}5$
- b)  $\text{Nc}3$
- c)  $\text{Qd}5$
- d)  $a5$

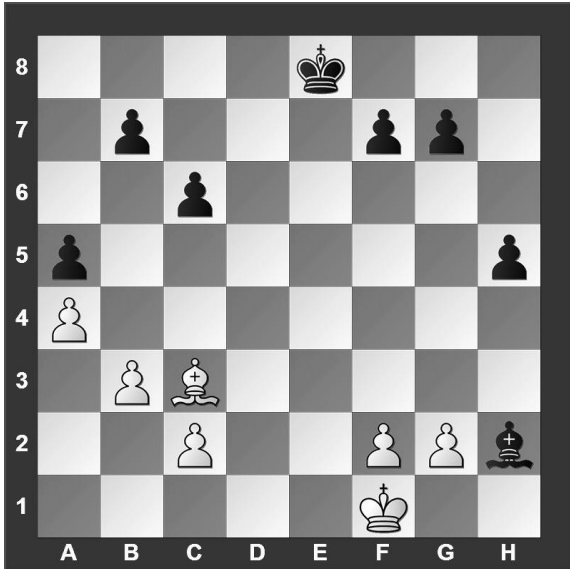
#12. White to move



What piece should White capture?

- a) Black's Knight
- b) Black's Rook
- c) Black's Bishop
- d) Black's Pawn

#13. White to move



What is White's best move?

- a) g3
- b) ♙x a5
- c) ♙x g7
- d) ♚e2

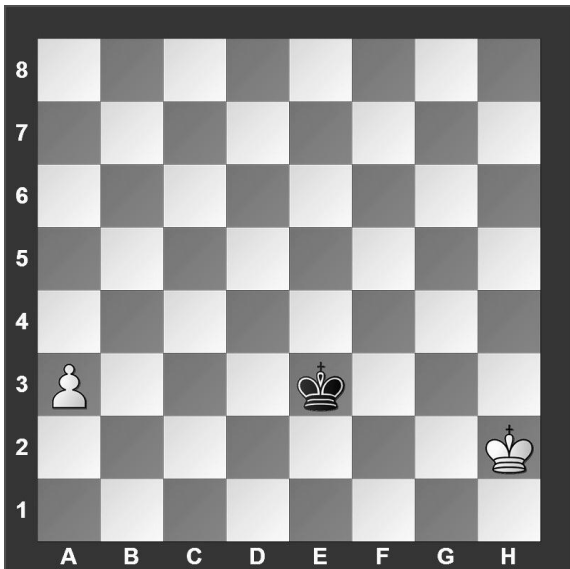
#14. White to move



What is White's best move?

- a) ♙x g4
- b) ♙h6
- c) ♙e5
- d) ♖h6

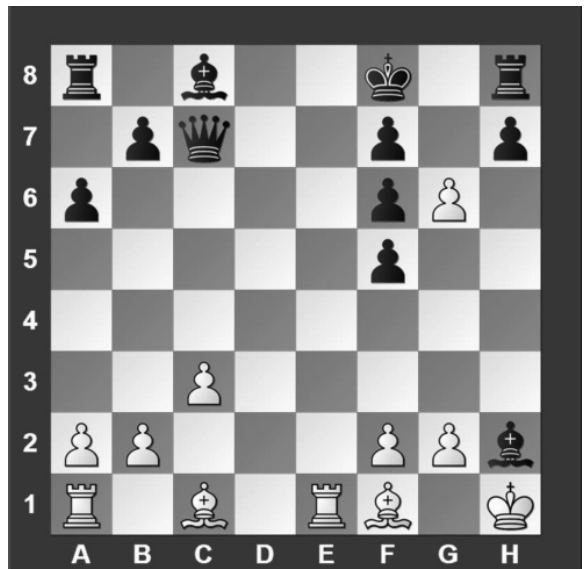
#15. Black to move



What is the outcome of the game?

- a) White wins.
- b) Black wins.
- c) Draw.
- d) It is not possible to tell.

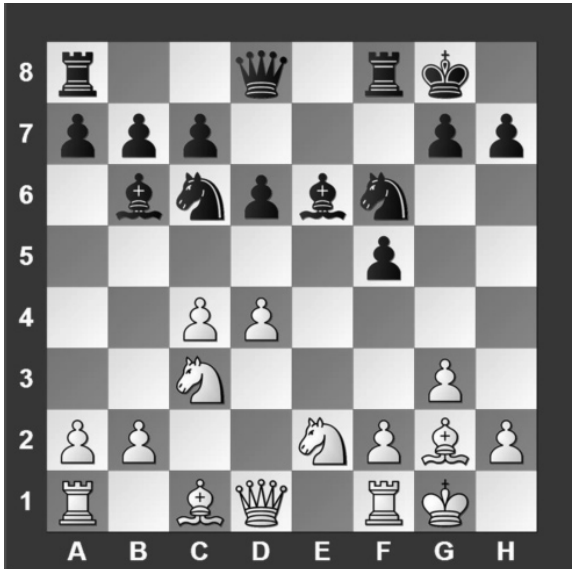
#16. White to move



White can checkmate Black in two moves, what is the *second* move?

- a) ♜e8
- b) ♗x f7
- c) ♗x h7
- d) g7

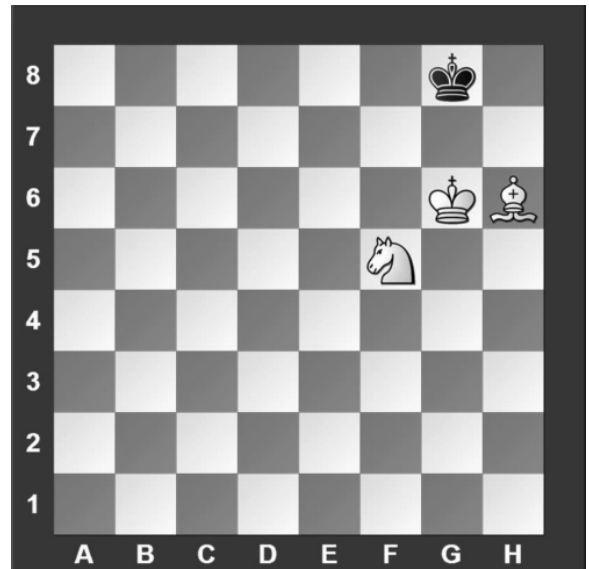
#17. White to move



What is White's best move?

- a) ♘f4
- b) ♘d5
- c) ♘b5
- d) d5

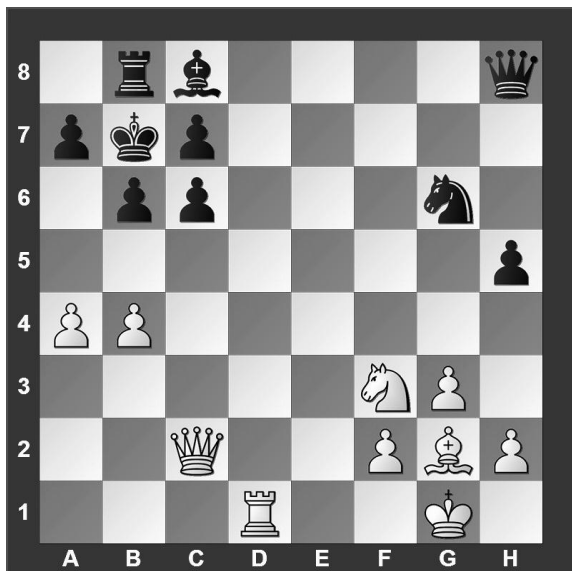
#18. White to move



With the best play, how many moves will it take White to checkmate Black?

- a) 1
- b) 2
- c) 3
- d) 4

#19. White to move



If White can checkmate Black in two moves, what is the first move?

- a) ♘e5
- b) ♙f1
- c) ♚c6
- d) ♖d8

#20. White to move



What is White's best move?

- a) ♚d8
- b) ♚e7
- c) ♚xb4
- d) ♖e1



**University Interscholastic League  
A+ Chess Puzzle Contest  
2022-2023 Spring — Grades 4 & 5**

**ANSWER KEY**

**Test**

- |       |       |
|-------|-------|
| 1. A  | 11. C |
| 2. C  | 12. B |
| 3. C  | 13. A |
| 4. C  | 14. B |
| 5. A  | 15. C |
| 6. C  | 16. A |
| 7. A  | 17. D |
| 8. C  | 18. B |
| 9. A  | 19. C |
| 10. B | 20. A |

**Tiebreaker**

- |      |      |
|------|------|
| 1. C | 5. A |
| 2. D | 6. C |
| 3. C | 7. D |
| 4. C | 8. B |

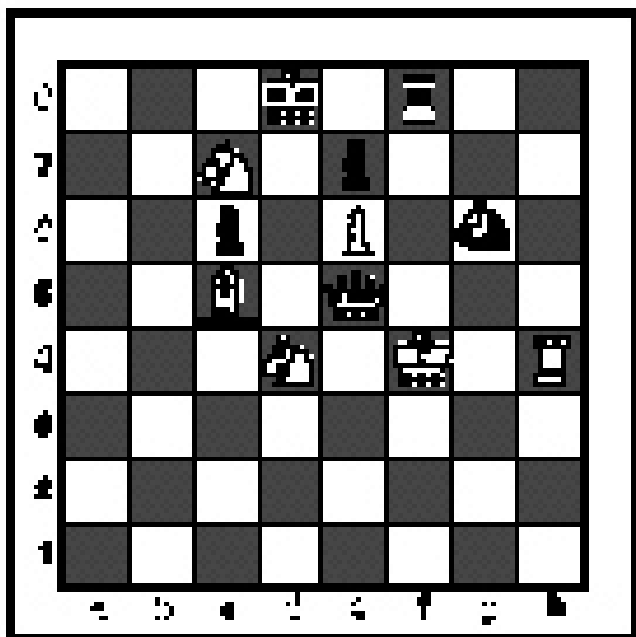


**SPRING DISTRICT 2022-2023**

**A+ ACADEMICS**



University Interscholastic League



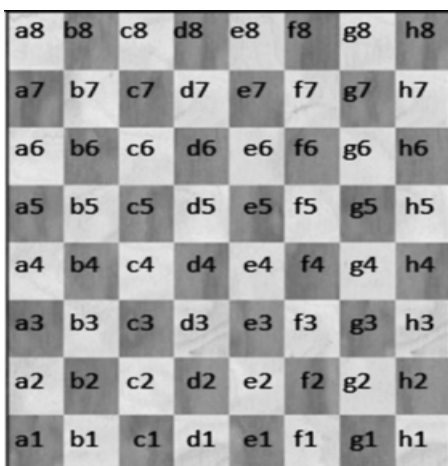
# Chess Puzzle Solving






grades 6, 7, 8

**DO NOT OPEN TEST  
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## How to read and answer questions on this test

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- Every square on the board has an "address" made up of a letter and a number.

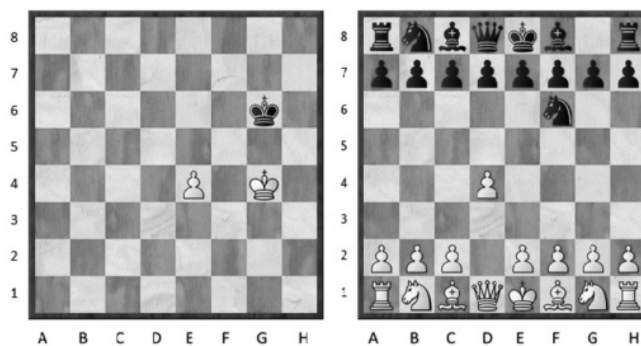


Piece Names	Each chessman can also be represented by a symbol, except for the pawn. (Figurine Notation)
King	
Queen	
Rook	
Bishop	
Knight	
Pawn	<b>a-h</b> (We write the file it's on.)

- To make them easy to read, the questions on this test use the figurine piece symbols on the right, above.
- When answering the puzzle questions, remember that white pawns move "up" the diagrams. Black pawns move "down" the diagrams.

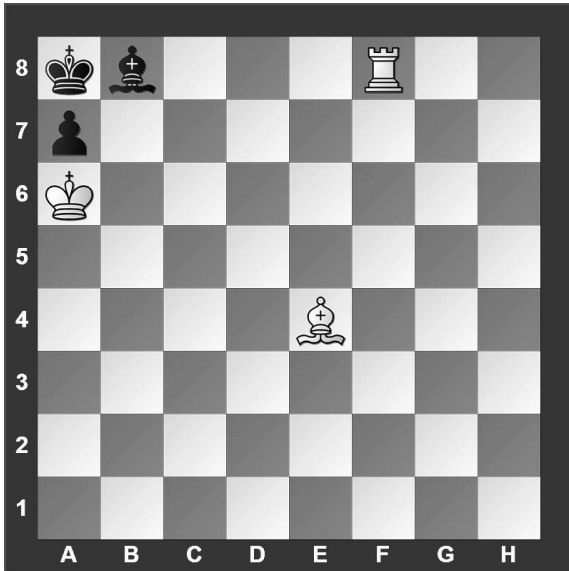
At right are two sample moves.

If you look closely at the diagrams in the questions below, you'll see that the frame around the diagram labels the ranks (1-8) and files (a-h) to help you.



White has just played **e4**. Black has just played ...  **f6**

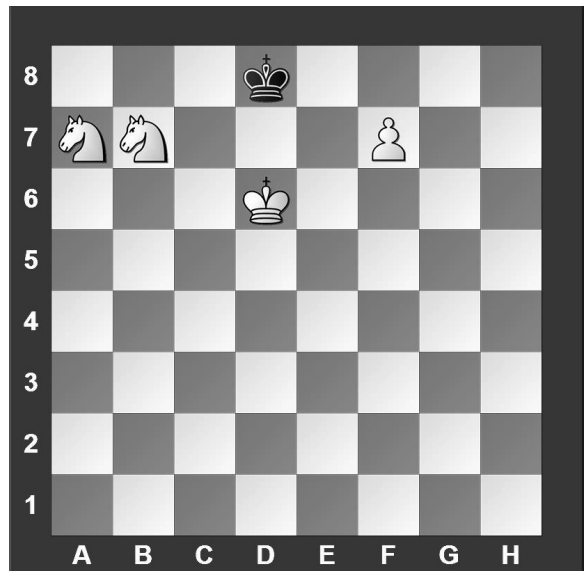
#1. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

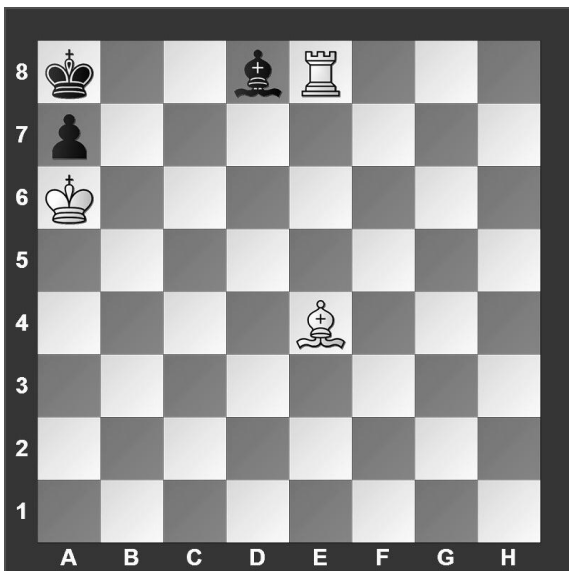
#2. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

#3. Black to move



What term best describes this situation?

- a) Black is in checkmate.
- b) Black is in stalemate.
- c) Black is in check.
- d) None of the above.

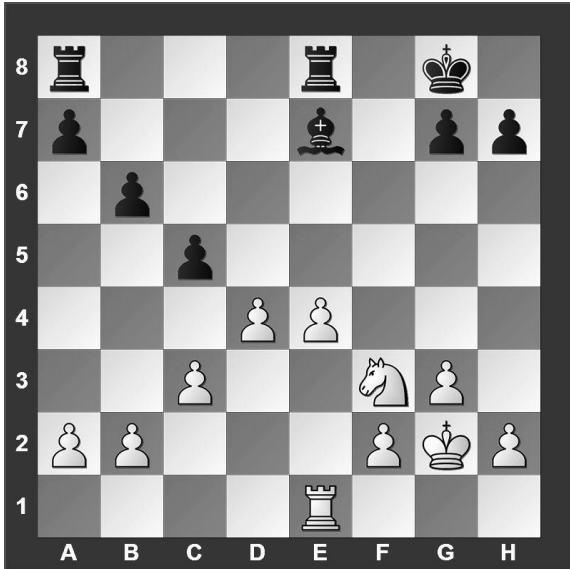
#4. White to move



Black just played e7 to e5. Which pawn can be captured?

- a) Black's b-pawn
- b) Black's d-pawn
- c) Black's c-pawn
- d) Black's e-pawn

#5.



Which side has material advantage?

- a) White
- b) It is even.
- c) Black
- d) It is not possible to tell.

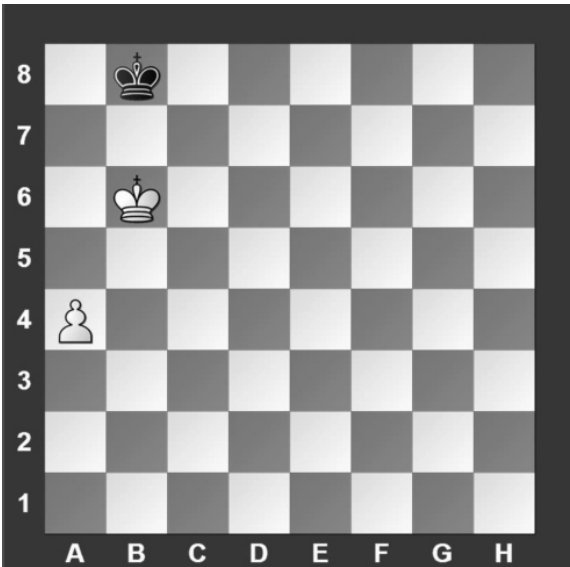
#6. Black to move



Which move is possible for Black?

- a) Short Castle.
- b) Long Castle.
- c) Take White's Queen
- d) Take White's Knight

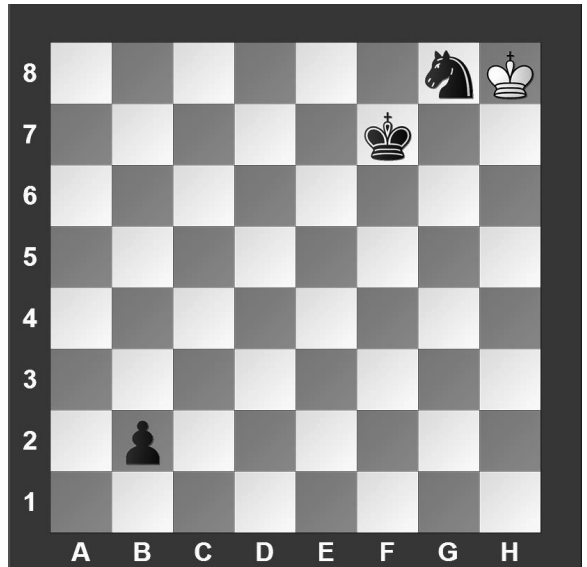
#7. White to move



With the best play, what is the outcome of the game?

- a) White wins
- b) Black wins
- c) Draw
- d) Impossible to tell

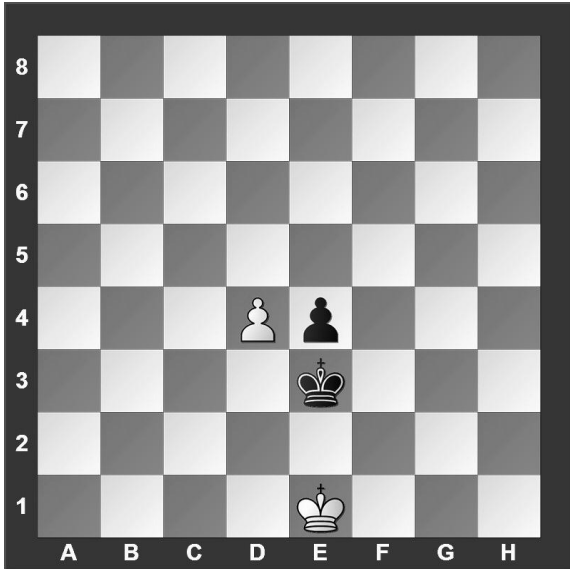
#8. Black to move



What is the best move?

- a) Promote to a Queen
- b) Promote to a Rook
- c) Promote to a Knight
- d) Promote to a Bishop

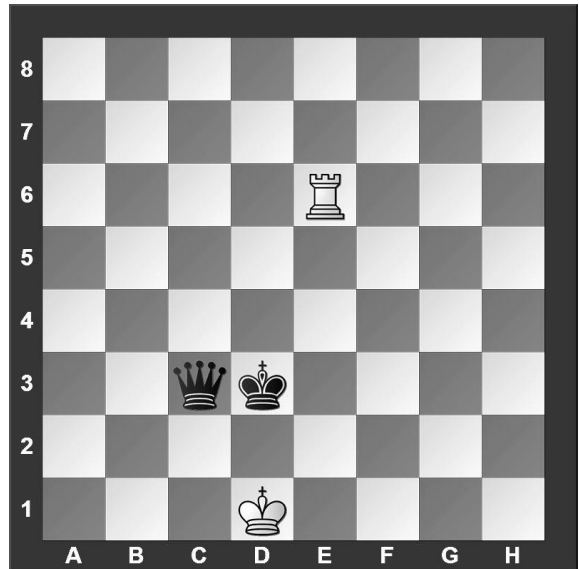
#9. White to move



What is the outcome of the game?

- a) Black wins.
- b) White wins.
- c) It is a draw.
- d) It is not possible to tell.

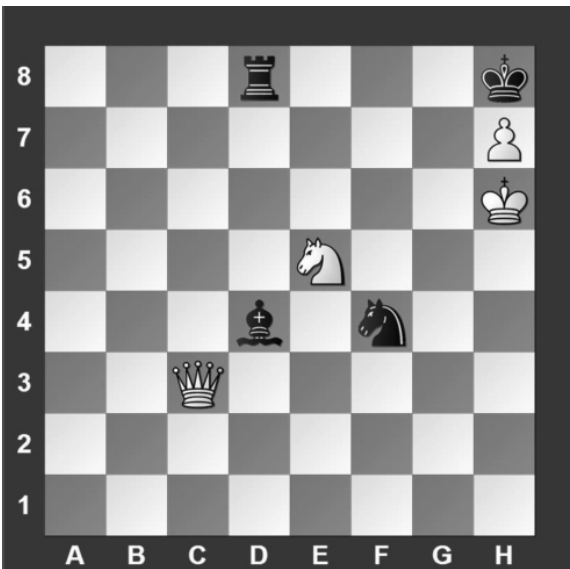
#10. White to move



What is White's best move?

- a) ♖d6
- b) ♖e3
- c) ♖c6
- d) ♖e2

#11. White to move



What is White's best move?

- a) ♖g6
- b) ♖f7
- c) ♖g3
- d) ♖e3

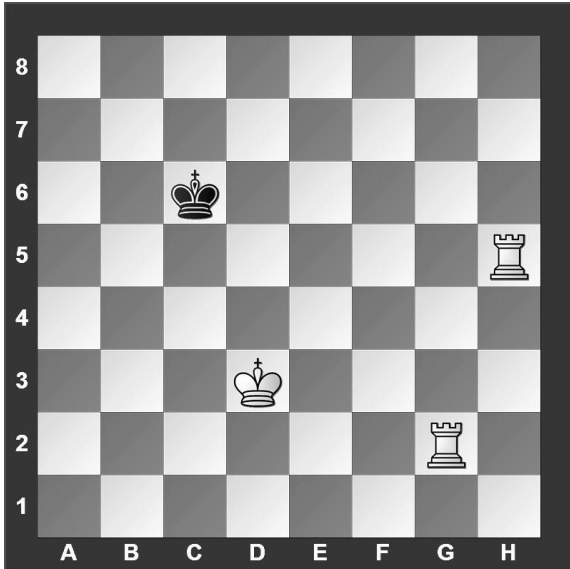
#12. White to move



What piece should White capture?

- a) Black's Knight
- b) Black's Queen
- c) Black's Bishop
- d) Black's Pawn

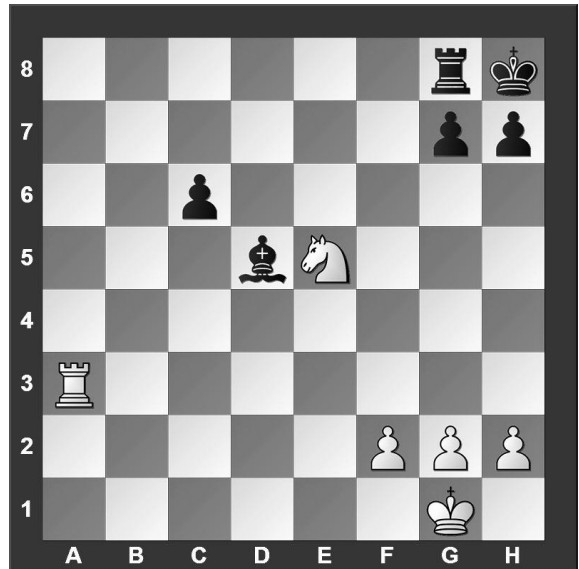
#13. White to move



How many moves should it take to checkmate Black in this position?

- a) One move.
- b) Two moves.
- c) Three moves.
- d) Four moves.

#14. White to move



What is White's best move?

- a)  $\text{Ng6}$
- b)  $\text{Bxc6}$
- c)  $\text{Rh3}$
- d)  $\text{f4}$

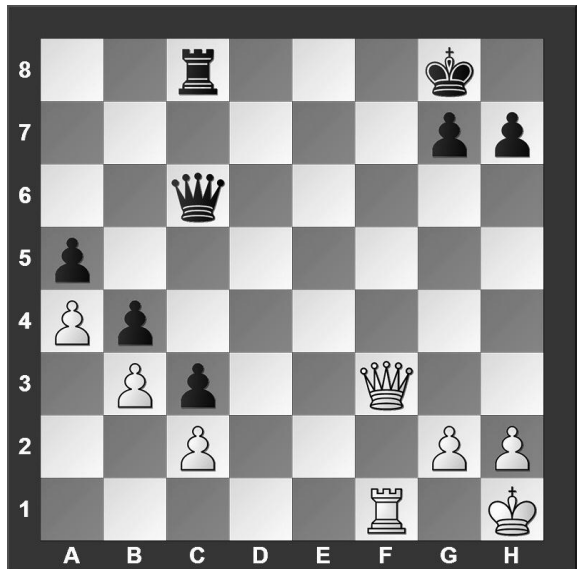
#15. White to move



What is White's best move?

- a)  $\text{fxe7}$
- b)  $\text{Nxc7}$
- c)  $\text{f7}$
- d)  $\text{gxf4}$

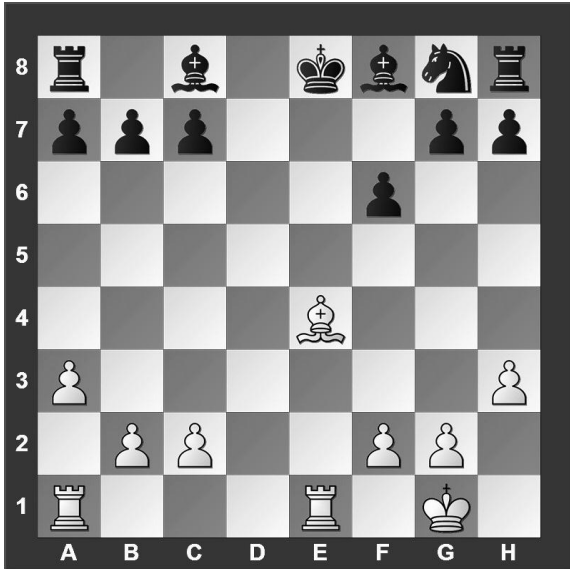
#16. White to move



If White can checkmate Black in three moves, what's the first move?

- a)  $\text{Kxc6}$
- b)  $\text{Kxc3}$
- c)  $\text{Kf8}$
- d)  $\text{Kf7}$

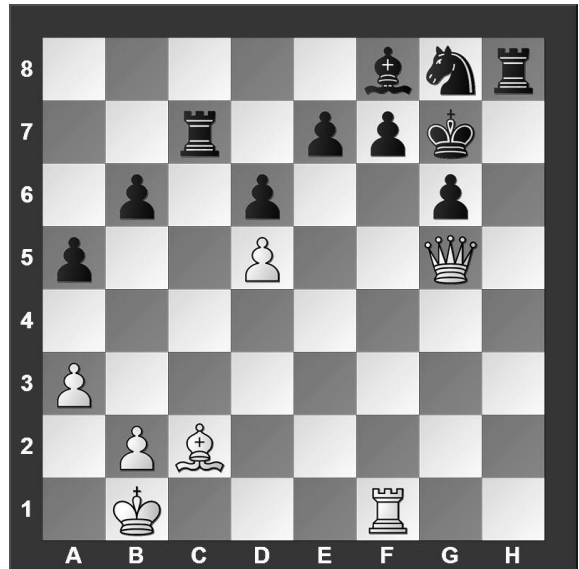
#17. White to move



If White can checkmate Black in two moves, what's the first move?

- a) ♕g6
- b) ♕c6
- c) ♕xh7
- d) ♕xb7

#18. White to move



What is White's best move?

- a) ♖xf7
- b) ♗xg6
- c) ♕xg6
- d) ♗xe7

#19. White to move



What is White's best move?

- a) ♘e4
- b) c3
- c) ♘h5
- d) f5

#20. White to move



If White can checkmate Black in two moves, what's the *first* move?

- a) ♖xd8
- b) ♖e7
- c) d7
- d) ♕xg4



**University Interscholastic League  
A+ Chess Puzzle Contest  
2022-2023 Spring — Grades 6, 7, and 8  
ANSWER KEY**

**Test**

- |       |       |
|-------|-------|
| 1. A  | 11. B |
| 2. A  | 12. B |
| 3. C  | 13. C |
| 4. D  | 14. A |
| 5. C  | 15. C |
| 6. C  | 16. D |
| 7. C  | 17. B |
| 8. B  | 18. A |
| 9. B  | 19. B |
| 10. B | 20. B |

**Tiebreaker**

- |      |      |
|------|------|
| 1. C | 5. A |
| 2. D | 6. C |
| 3. C | 7. D |
| 4. C | 8. B |

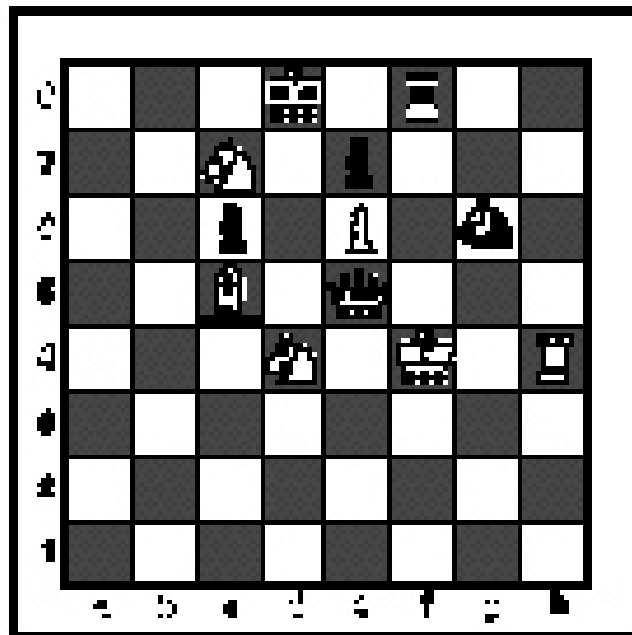


**SPRING DISTRICT 2022-2023**

**A+ ACADEMICS**



University Interscholastic League



# Chess Puzzle Solving

## TIEBREAKER - ALL GRADES

**DO NOT OPEN TEST  
UNTIL TOLD TO DO SO**

**IMPORTANT INSTRUCTIONS:**

This is the tiebreaker test for all grades for the Spring District UIL Chess Puzzle Solving Test.

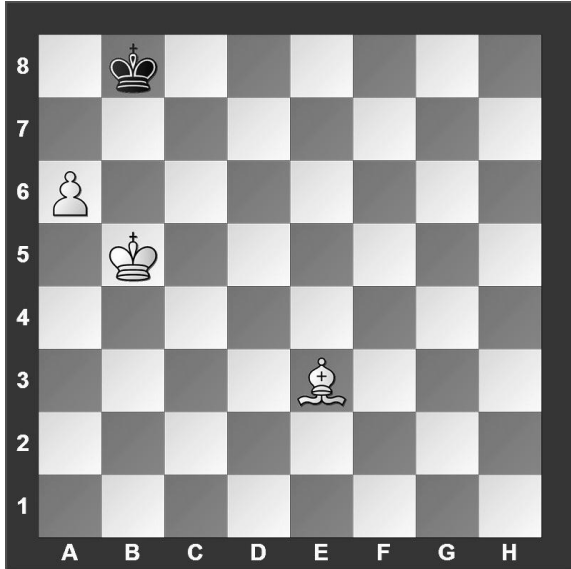
**Use the separate answer sheet to write all your answers.** You have five (5) minutes to take this part of the test. There are eight (8) questions. Some questions are very difficult.

As before, the symbols for check and checkmate commonly used after moves have been omitted because they would be hints.

Each correct answer earns you one point. There is no penalty for incorrect answers or unanswered questions.

These questions are hard, but the puzzles are interesting! Good luck and have fun!

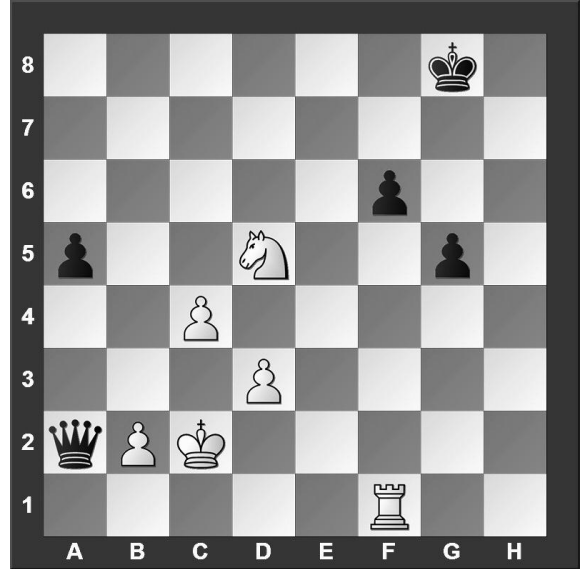
#1. White to move



What should be the outcome of the game?

- a) White wins.
- b) Black wins.
- c) Draw.
- d) It is not possible to tell.

#2. White to move



What is White's best move?

- a) ♘xf6
- b) ♘e7
- c) ♖xf6
- d) ♘c3

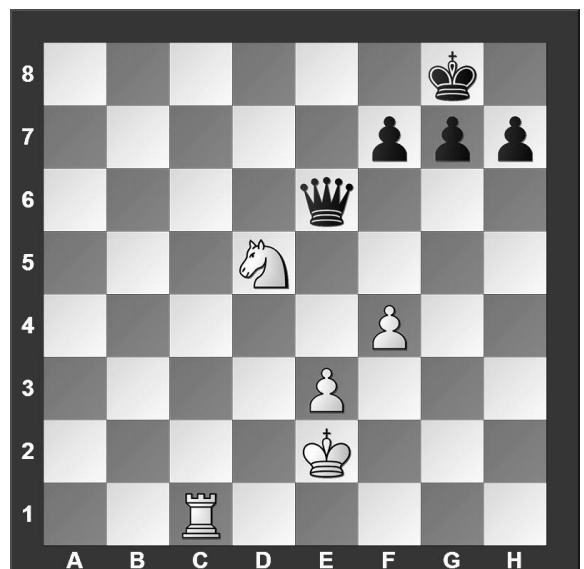
#3. White to move



What is White's best move

- a) ♕e3
- b) g5
- c) ♘a4
- d) ♘b5

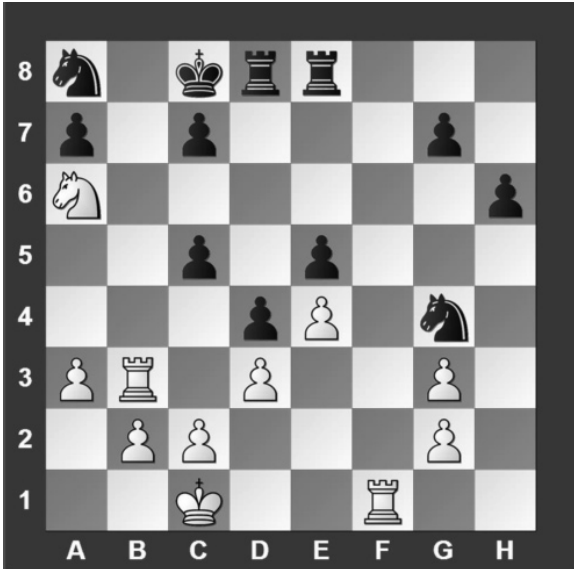
#4. White to move



What is White's best move?

- a) ♘e7
- b) ♘f6
- c) ♖c8
- d) f5

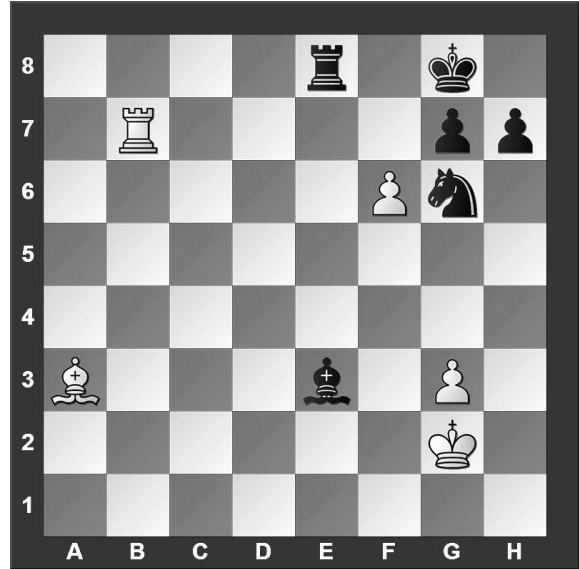
#5. White to move



What is White's best move?

- a) ♖f7
- b) ♖b8
- c) ♘xc5
- d) ♖f4

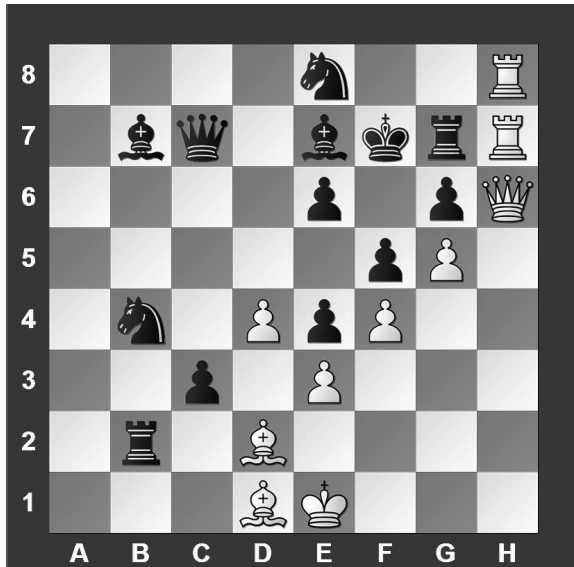
#6. White to move



What is White's best move?

- a) ♖xg7
- b) f×g7
- c) f7
- d) ♖e7

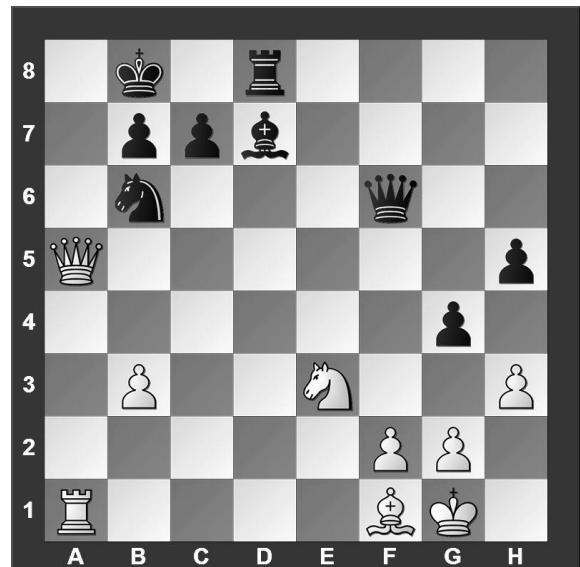
#7. White to move



If White can checkmate Black in two moves, what is White's *second* move?

- a) ♖xg7
- b) ♖xg7
- c) ♖xg6
- d) ♘h5

#8. White to move



If White can force checkmate in three moves, what is White's *first* move?

- a) ♖a8
- b) ♖a7
- c) ♘xg4
- d) h×g4

Contestant Number \_\_\_\_\_

Contestant Name \_\_\_\_\_  
(to be filled in after judging)

# UIL A+ Creative Writing Evaluation Sheet

## Elementary

Evaluation criteria are listed in the order of importance. Circle score rating in each of the three major areas of *creativity & interest*, *organization*, and *correctness of style* and tally the points.

(60%) 1 2 3 4 5 6 7 8 9 10 11 12

**CREATIVITY & INTEREST** Interest depends primarily upon substance. It depends next upon clarity and upon including specific details and examples, which individualize the story as an outgrowth of the writer's character and experience.

(30%) 1 2 3 4 5 6

**Organization** A well-organized story will present ideas in a logical and coherent manner.

(10%) 1 2

**Correctness of Style** Grammatical correctness of style includes avoiding errors in sentence structure, punctuation, grammar, spelling and word usage.

**TOTAL SCORE:** \_\_\_\_\_/20

### CONSTRUCTIVE COMMENTS FOR THE CONTESTANT

Please read "Instructions for the Judges" before evaluating second grade Creative Writing contestants' papers. Please make your comments using language understandable to the contestant and make all comments constructive and supportive. While judges are to consider all three elements in selecting the most effective compositions, they should weigh creativity and interest more than organization, and organization more than correctness of style.

**Judge's signature** \_\_\_\_\_



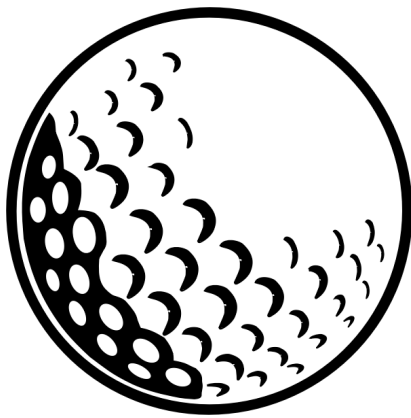
# A+ Creative Writing Contest

INVITATIONAL

GRADE 2

2022-2023

Write a story on your own paper. You must write about at least one of the things shown on this page. You may use as many of the pictures as you want.



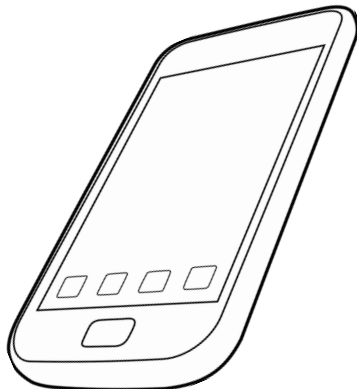
golf ball



grocery store



snow



cell phone



trophy



# A+ Creative Writing Contest

FALL/WINTER DISTRICT

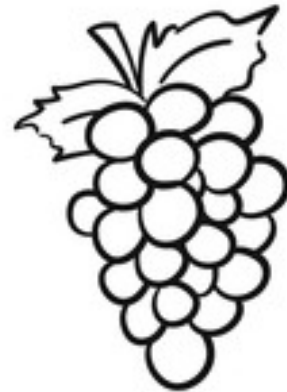
GRADE 2

2022-2023

Write a story on your own paper. You must write about at least one of the things shown on this page. You may use as many of the pictures as you want.



cowboy boots



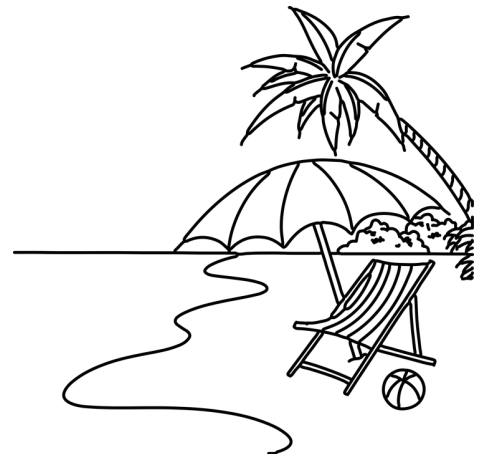
grapes



lollipop



laptop computer



beach



# A+ Creative Writing Contest

SPRING DISTRICT

GRADE 2

2022-2023

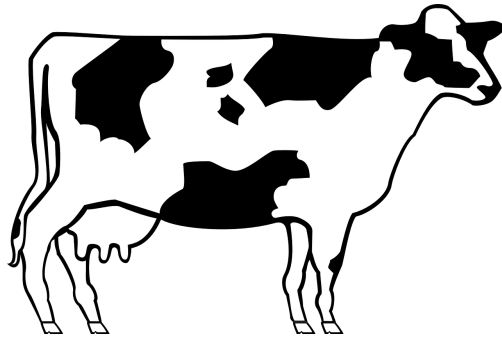
Write a story on your own paper. You must write about at least one of the things shown on this page. You may use as many of the pictures as you want.



sunflower



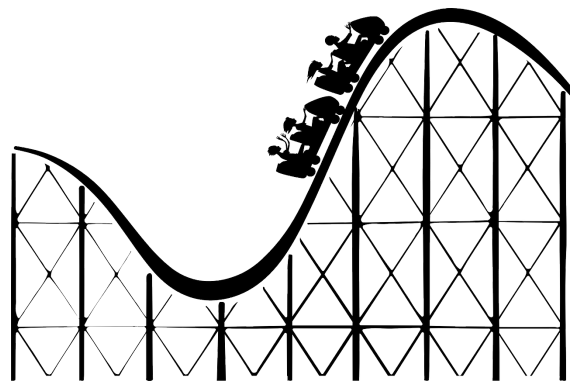
pie



COW



newspaper



roller coaster



**CONTESTANT NUMBER:**

**FOR GRADER USE ONLY**

Score Test Below:

\_\_\_\_\_ out of 120. Initials \_\_\_\_\_

\_\_\_\_\_ out of 120. Initials \_\_\_\_\_

**Papers contending to place:**

\_\_\_\_\_ out of 120. Initials \_\_\_\_\_



**University Interscholastic League  
A+ Dictionary Skills Contest • Answer Sheet**

*Write your contestant number in the upper right corner, and circle your grade below.*

**Circle Grade Level:                    5           6           7           8**

1.    A    B    C    D

2.    A    B    C    D

3.    A    B    C    D

4.    A    B    C    D

5.    A    B    C    D

6.    A    B    C    D

7.    A    B    C    D

8.    A    B    C    D

9.    A    B    C    D

10.   A    B    C    D

11.   A    B    C    D

12.   A    B    C    D

13.   A    B    C    D

14.   A    B    C    D

15.   A    B    C    D

16.   A    B    C    D

17.   A    B    C    D

18.   A    B    C    D

19.   A    B    C    D

20.   A    B    C    D

21.    A    B    C    D

22.    A    B    C    D

23.    A    B    C    D

24.    A    B    C    D

25.    A    B    C    D

26.    A    B    C    D

27.    A    B    C    D

28.    A    B    C    D

29.    A    B    C    D

30.    A    B    C    D

31.    A    B    C    D

32.    A    B    C    D

33.    A    B    C    D    E    F    G    H

34.    A    B    C    D    E    F    G    H

35.    A    B    C    D    E    F    G    H

36.    A    B    C    D    E    F    G    H

37.    A    B    C    D    E    F    G    H

38.    A    B    C    D    E    F    G    H

39.    A    B    C    D    E    F    G    H

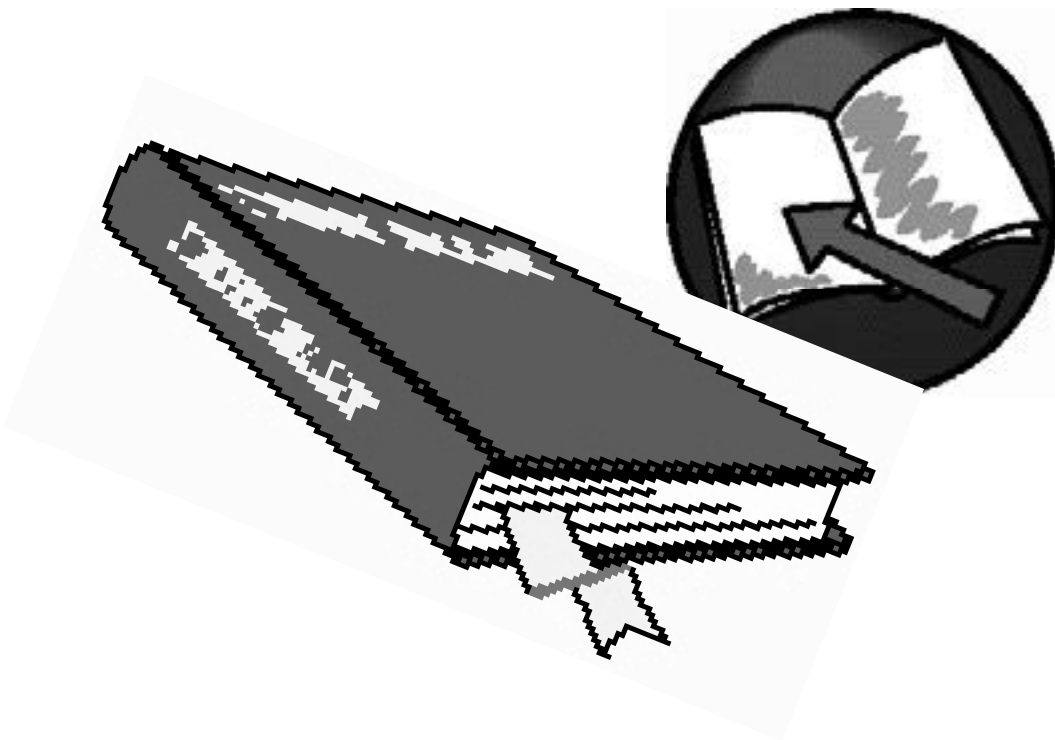
40.    A    B    C    D    E    F    G    H

**INVITATIONAL 2022-2023**

**A+ ACADEMICS**



University Interscholastic League



# Dictionary Skills

grades 5 & 6

**DO NOT OPEN TEST  
UNTIL TOLD TO DO SO**

**University Interscholastic League  
2022-2023 Dictionary Skills Contest  
Invitational District Test — Grades 5 & 6**

1. Which of the following is a type of mushroom?  
A. Skate  
B. Morel  
C. Perch  
D. Coati
2. When added to food, carrageenan makes the food \_\_\_\_\_?  
A. Bitter  
B. Sweeter  
C. Drier  
D. Thicker
3. Sebaceous glands control what bodily function?  
A. Oil production on skin  
B. Hormone regulation  
C. Digestive function  
D. Saliva production
4. Which of the following household items requires a pilot light to function?  
A. Refrigerator  
B. Water heater  
C. Dishwasher  
D. Television
5. A rapier is a type of \_\_\_\_\_?  
A. Office supply  
B. Gate  
C. Sword  
D. Chair
6. Gin is derived from the fruit of which tree?  
A. Juniper  
B. Ginkgo  
C. Pine  
D. Pecan
7. What does water look like if it is turbid?  
A. Clear  
B. Cloudy  
C. Bubbly  
D. Purple-tinted
8. Which of the following can be found in outer space?  
A. Spindle  
B. Umbel  
C. Gladiolus  
D. Nebula
9. A precursor to the modern refrigerator was the \_\_\_\_\_?  
A. Lute  
B. Ohmmeter  
C. Ice box  
D. Scepter
10. Which of the following types of clothing is considered ubiquitous to today's fashion?  
A. Chainmail  
B. Sunbonnet  
C. Pince-nez  
D. Blue jeans

11. Which of the following is a synonym for haughty?  
A. Spontaneous  
B. Arrogant  
C. Foolish  
D. Creative
12. What activity is a quill utilized in?  
A. Ice hockey  
B. Woodworking  
C. Handwriting  
D. Sailing
13. Which body part uses a ball-and-socket joint to allow movement?  
A. Hip  
B. Spine  
C. Thumb  
D. Knee
14. Which state do the Hopi reside in?  
A. Texas  
B. Maine  
C. Utah  
D. Arizona
15. A bishop oversees which of the following religious organizations?  
A. Diocese  
B. Temple  
C. Mosque  
D. Monastery
16. Which ancient civilization utilized the phalanx in battle?  
A. Ancient Egypt  
B. Mesopotamia  
C. Ancient Greece  
D. Aztec Empire
17. Which of the following plants is a member of the xerophyte group?  
A. Daisy  
B. Cactus  
C. Oak tree  
D. Grass
18. The phrase *auld lang syne* translates to \_\_\_\_\_?  
A. Goodbye  
B. Good luck  
C. Season's greetings  
D. The good old times
19. Human hair and fingernails are made up of what substance?  
A. Sugar  
B. Bone  
C. Keratin  
D. Ivory
20. Which of the following is a weapon?  
A. Halberd  
B. Mussel  
C. Jamb  
D. Plait
21. A filament is a necessary part of the function of which item?  
A. Recorder  
B. Microscope  
C. Schooner  
D. Lightbulb

22. Where would a bachelor's button be found?  
 A. Wedding  
 B. Garden  
 C. Hospital  
 D. Shopping mall
23. Which body part contains melanin?  
 A. Bones  
 B. Liver  
 C. Hair  
 D. Skin
24. Which of the following is an antonym of auspicious?  
 A. Successful  
 B. Favorable  
 C. Hopeless  
 D. Prosperous
25. A lozenge most resembles which shape?  
 A. Diamond  
 B. Square  
 C. Parallelogram  
 D. Octagon
26. What does it mean to be sequestered?  
 A. To be hungry  
 B. To be tired  
 C. To be alone  
 D. To be excited
27. The art, science, or profession of teaching is known as \_\_\_\_\_?  
 A. Ophthalmology  
 B. Pedagogy  
 C. Monopoly  
 D. Paleontology
28. If you attend a parochial school, what kind of school are you in?  
 A. High school  
 B. University  
 C. Religious school  
 D. Trade school
29. Which type of music combines French and Caribbean influences?  
 A. Celtic  
 B. Blues  
 C. Polka  
 D. Zydeco
30. The thyroid regulates which important bodily function?  
 A. Hormone production  
 B. Blood clotting  
 C. Hair growth  
 D. Digestion
31. How big is a hogshead?  
 A. 28 liters  
 B. 45 milliliters  
 C. 82 pints  
 D. 63 gallons
32. Which of the following is a type of tea?  
 A. Osmium  
 B. Pinochle  
 C. Garnet  
 D. Oolong

**Match each of the following words to its correct meaning:**

- |                       |                           |
|-----------------------|---------------------------|
| _____ 33. nomad       | A. Where things combine   |
| _____ 34. omnibus     | B. A farewell speech      |
| _____ 35. phantom     | C. A type of bird         |
| _____ 36. nimbus      | D. Containing many things |
| _____ 37. valedictory | E. A ghost                |
| _____ 38. juncture    | F. One who roams          |
| _____ 39. temperance  | G. A rain cloud           |
| _____ 40. kookaburra  | H. Moderation             |

**University Interscholastic League  
2022-23 Dictionary Skills Contest  
Invitational Test — Grades 5 & 6**

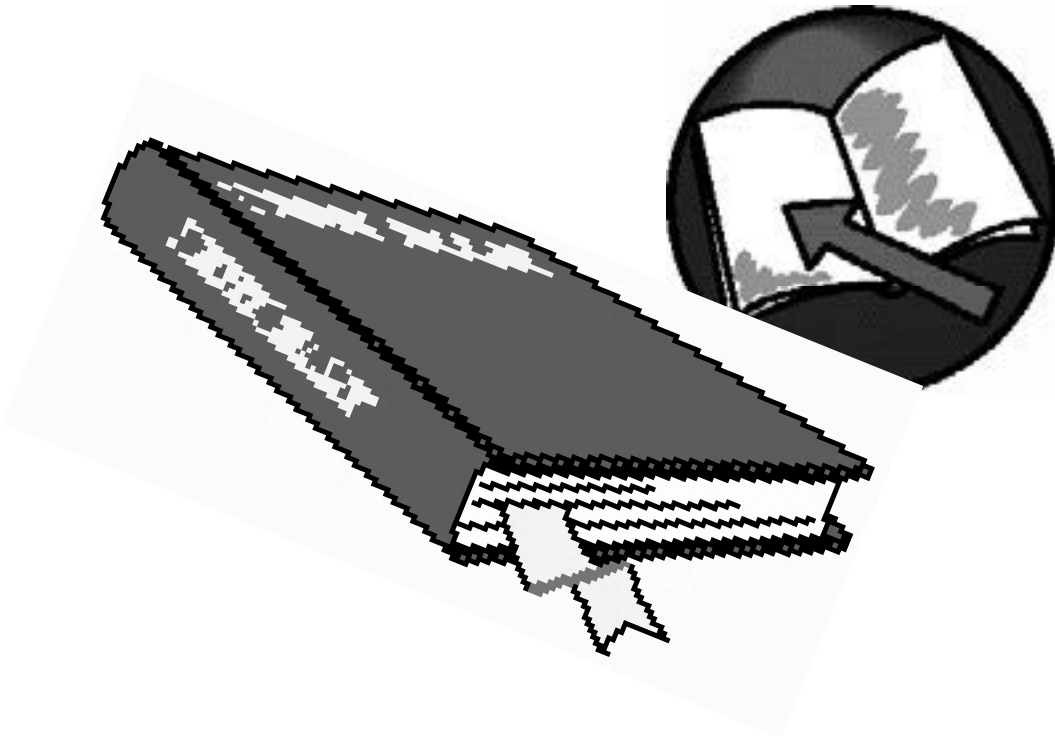
**Answer Key**

- |       |       |
|-------|-------|
| 1. B  | 21. D |
| 2. D  | 22. B |
| 3. A  | 23. D |
| 4. B  | 24. C |
| 5. C  | 25. A |
| 6. A  | 26. C |
| 7. B  | 27. B |
| 8. D  | 28. C |
| 9. C  | 29. D |
| 10. D | 30. A |
| 11. B | 31. D |
| 12. C | 32. D |
| 13. A | 33. F |
| 14. D | 34. D |
| 15. A | 35. E |
| 16. C | 36. G |
| 17. B | 37. B |
| 18. D | 38. A |
| 19. C | 39. H |
| 20. A | 40. C |

**FALL/WINTER DISTRICT**  
**A+ ACADEMICS**



University Interscholastic League



# Dictionary Skills

grades 5 & 6

**DO NOT OPEN TEST**  
**UNTIL TOLD TO DO SO**



**University Interscholastic League  
2022-2023 Dictionary Skills Contest  
Fall/Winter District Test — Grades 5 & 6**

1. Which of the following is a synonym of iniquity?  
A. Virtue  
B. Happiness  
C. Wickedness  
D. Hunger
2. The Western Roman Empire referred to Asia as the Orient and referred to Europe as the \_\_\_\_\_?  
A. Orbital  
B. Occident  
C. Omega  
D. Opine
3. The thorax is what part of the body?  
A. Head  
B. Lower legs  
C. Shoulders  
D. Abdomen
4. Which country celebrates Bastille Day?  
A. Japan  
B. Brazil  
C. France  
D. Egypt
5. What does a kelvin measure?  
A. Distance  
B. Temperature  
C. Weight  
D. Length
6. What kind of creature is a louse?  
A. Dog  
B. Rodent  
C. Insect  
D. Fish
7. How many sides does a nonagon have?  
A. Nine  
B. Twelve  
C. Four  
D. Zero
8. A blunderbuss is a type of \_\_\_\_\_?  
A. Clothing  
B. Boat  
C. Weapon  
D. Backpack
9. Which profession would need to know their Mach number while doing their job?  
A. Doctor  
B. Pilot  
C. Lawyer  
D. Teacher
10. Where could you find a spelunker?  
A. At the beach  
B. In a school  
C. At the gym  
D. In a cave

11. What elements are present in formaldehyde?  
 A. Carbon, hydrogen, and oxygen  
 B. Nitrogen and oxygen  
 C. Sodium and chlorine  
 D. Magnesium, calcium, and potassium
12. Roquefort is a type of \_\_\_\_\_?  
 A. Fruit  
 B. Cheese  
 C. Milk  
 D. Fish
13. Which of the following is an antonym of extemporaneous?  
 A. Improvised  
 B. Creative  
 C. Rehearsed  
 D. Comfortable
14. If someone is native to an area, then they are also \_\_\_\_\_?  
 A. Abstruse  
 B. Abstinent  
 C. Abnormal  
 D. Aboriginal
15. Nylon is made up of what kind of fibers?  
 A. Synthetic  
 B. Cotton  
 C. Wool  
 D. Linen
16. A garden could have which of the following qualities?  
 A. Curt  
 B. Verdant  
 C. Systolic  
 D. Gauche
17. Where could cellophane be found?  
 A. Gym  
 B. Bank  
 C. Parking garage  
 D. Flower shop
18. If something is lurid, then it is \_\_\_\_\_?  
 A. Dream-like  
 B. Lucky  
 C. Shocking  
 D. Cluttered
19. The endocrine system releases what important bodily fluid?  
 A. Hormones  
 B. Blood  
 C. Saliva  
 D. Bile
20. Which of the following is **NOT** a synonym of slap-dash?  
 A. Random  
 B. Erratic  
 C. Haphazard  
 D. Methodical
21. On what part of your body would you wear a brooch?  
 A. Ankle  
 B. Wrist  
 C. Chest  
 D. Hip

22. If you have a qualm about a situation, then you have what kind of feeling?  
A. Excitement  
B. Uneasiness  
C. Boredom  
D. Exhaustion
23. What is a compote?  
A. A type of dessert  
B. A kind of fish  
C. A disease  
D. An outdoor activity
24. In Ancient Greek myth, Jason sailed looking for the Golden Fleece with what kind of heroes?  
A. Amazonians  
B. Archenemies  
C. Astronauts  
D. Argonauts
25. A pyromaniac tends to do which of the following actions?  
A. Read books  
B. Climb trees  
C. Set fires  
D. Make pottery
26. In the United States, Memorial Day is celebrated on which day?  
A. The third Sunday in June  
B. The last Monday in May  
C. The last Thursday in April  
D. The first Friday in August
27. You might be able to haggle with which of the following people?  
A. Shopkeeper  
B. Athlete  
C. Chef  
D. Banker
28. If someone is illiterate, then they cannot \_\_\_\_\_?  
A. Run  
B. Swim  
C. Read  
D. Cook
29. Which of the following could be used as a libation?  
A. A lamp  
B. A television  
C. A cell phone  
D. A glass of champagne
30. One who is retired but keeps their honorary title is known as \_\_\_\_\_?  
A. Emeritus  
B. Elderly  
C. Evasive  
D. Emissary
31. Which word means to change the qualities of something?  
A. Kibosh  
B. Denature  
C. Loiter  
D. Obdurate
32. Where could you spend a rupee?  
A. South Korea  
B. Bolivia  
C. Canada  
D. India

**Match each of the following words to its correct meaning:**

- |                       |                               |
|-----------------------|-------------------------------|
| _____ 33. flighty     | A. A major city               |
| _____ 34. guinea fowl | B. A kind of sausage          |
| _____ 35. metropolis  | C. A type of bird             |
| _____ 36. knockwurst  | D. A tendency                 |
| _____ 37. inclination | E. Lacking stability          |
| _____ 38. detergent   | F. Feeling lightheaded        |
| _____ 39. woozy       | G. Stimulate with electricity |
| _____ 40. galvanize   | H. Soap                       |

**University Interscholastic League  
2022-23 Dictionary Skills Contest  
Fall/Winter Test — Grades 5 & 6**

**Answer Key**

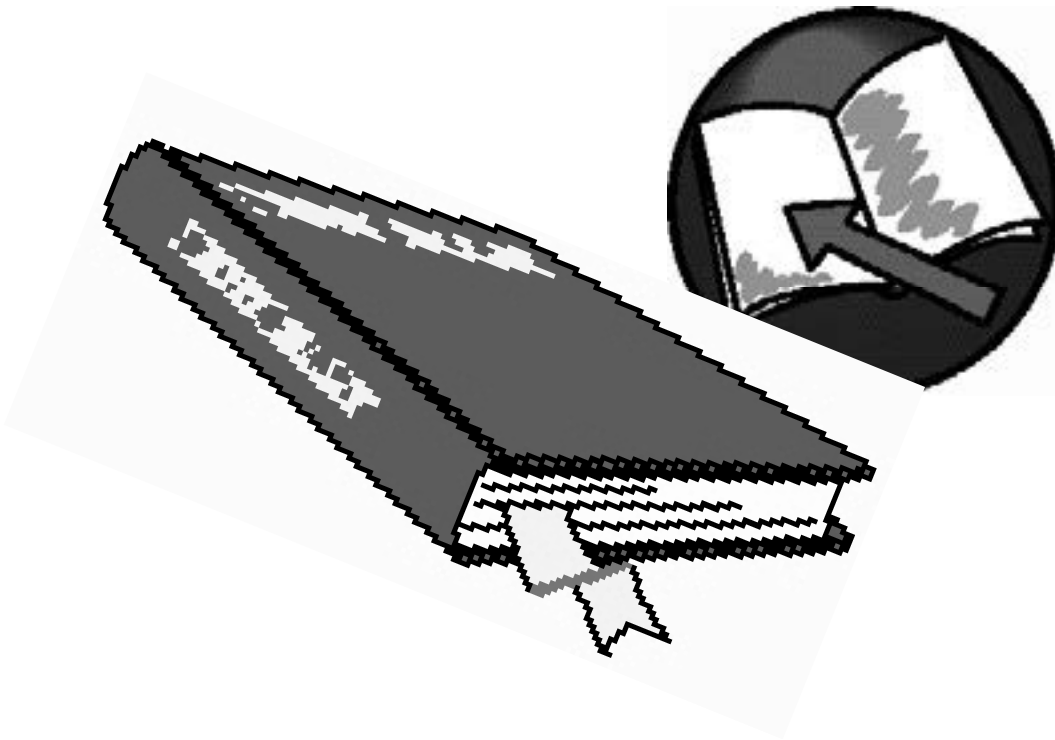
- |       |       |
|-------|-------|
| 1. C  | 21. C |
| 2. B  | 22. B |
| 3. D  | 23. A |
| 4. C  | 24. D |
| 5. B  | 25. C |
| 6. C  | 26. B |
| 7. A  | 27. A |
| 8. C  | 28. C |
| 9. B  | 29. D |
| 10. D | 30. A |
| 11. A | 31. B |
| 12. B | 32. D |
| 13. C | 33. E |
| 14. D | 34. C |
| 15. A | 35. A |
| 16. B | 36. B |
| 17. D | 37. D |
| 18. C | 38. H |
| 19. A | 39. F |
| 20. D | 40. G |

**SPRING DISTRICT 2022-2023**

**A+ ACADEMICS**



University Interscholastic League



# Dictionary Skills

grades 5 & 6

**DO NOT OPEN TEST  
UNTIL TOLD TO DO SO**

**University Interscholastic League  
2022-23 Dictionary Skills Contest  
Spring District Test — Grades 5 & 6**

1. How many lines does a quatrain contain?  
A. Five  
B. Seven  
C. Four  
D. Two
2. Which of the following is a synonym for genteel?  
A. Elegant  
B. Grumpy  
C. Athletic  
D. Tired
3. What are the usual parts of a triathlon?  
A. Swimming, diving, and surfing  
B. Hiking, skiing, and archery  
C. Swimming, bicycling, and running  
D. Dressage, eventing, and jumping
4. How would you perform a gavotte?  
A. Run  
B. Sing  
C. Act  
D. Dance
5. If you are being a sycophant, then you are \_\_\_\_\_ someone?  
A. Hugging  
B. Flattering  
C. Chastising  
D. Ignoring
6. What kind of creature is a quetzal?  
A. Bird  
B. Dragon  
C. Big cat  
D. Snake
7. When a location becomes very filthy, it can be called \_\_\_\_\_?  
A. Senile  
B. Sporrán  
C. Systolic  
D. Squalid
8. Where is a blitz conducted from?  
A. The sea  
B. The land  
C. The air  
D. Outer space
9. What kind of athlete requires a caddie's assistance?  
A. Hockey goalie  
B. Football quarterback  
C. Baseball shortstop  
D. Pro golfer

10. Lye can be an ingredient in which of the following items?  
A. Cake  
B. Soap  
C. Root beer  
D. Contact lens solution
11. Which of these animals is a marsupial?  
A. Armadillo  
B. Tapir  
C. Opossum  
D. Okapi
12. In astrology, Capricorn is which sign?  
A. 5th  
B. 8th  
C. 1st  
D. 10th
13. To juxtapose two things means to \_\_\_\_\_ them?  
A. Compare  
B. Separate  
C. Combine  
D. Exchange
14. Where would you find an Erlenmeyer flask?  
A. Laboratory  
B. Lavatory  
C. Lighthouse  
D. Labyrinth
15. Holstein is a breed of what kind of animal?  
A. Cat  
B. Dog  
C. Cow  
D. Horse
16. An awl is used to perform what task?  
A. Cutting  
B. Piercing  
C. Sewing  
D. Fixing
17. What month is Canada Day observed in?  
A. March  
B. June  
C. February  
D. July
18. Which of the following colors is drab?  
A. Dark blue  
B. Light brown  
C. Hot pink  
D. Pale purple
19. The word delicatessen comes to English from what other language?  
A. Spanish  
B. French  
C. Russian  
D. Turkish
20. Carob can be used to substitute for which ingredient?  
A. Milk  
B. Eggs  
C. Flour  
D. Chocolate



21. Which of the following dog breeds is known for being very large?  
A. Greyhound  
B. Beagle  
C. Newfoundland  
D. Pekingese
22. What is the next number in this Fibonacci number sequence: 1, 1, 2, 3, \_?  
A. 4  
B. 6  
C. 3  
D. 5
23. Which sport has players arranged in the infield?  
A. Baseball  
B. Ice hockey  
C. Rugby  
D. Soccer
24. Which of the following is a markup language?  
A. ASCII  
B. HTML  
C. JPEG  
D. HDMI
25. Identify the past participle from this sentence: The children have played this game before.  
A. Children  
B. Before  
C. Game  
D. Played
26. Which plant is used to create linen?  
A. Cotton  
B. Bamboo  
C. Flax  
D. Straw
27. Which of the following is **NOT** a synonym of facetious?  
A. Joking  
B. Solemn  
C. Clever  
D. Unserious
28. What kind of insects are June bugs?  
A. Arachnids  
B. Beetles  
C. Flies  
D. Bees
29. A dowry is given at what kind of event?  
A. Birthday  
B. Retirement  
C. Wedding  
D. Funeral
30. In Ancient Greek legend, who dipped Achilles into the River Styx?  
A. Paris  
B. Patroclus  
C. His mother  
D. His father
31. Which of the following cities is split into five different boroughs?  
A. New York City  
B. Seattle  
C. Miami  
D. Dallas

32. When thrown properly, a knuckleball flies \_\_\_\_\_?  
A. Straight  
B. In a curve  
C. Erratically  
D. Up into the air

**Match each of the following words to its correct meaning:**

- |                       |  |
|-----------------------|--|
| _____ 33. forceps     | A. a type of sandwich                  |
| _____ 34. glib        | B. felt on both sides                  |
| _____ 35. reciprocal  | C. a plant with yellow flowers         |
| _____ 36. enamor      | D. a stringed instrument               |
| _____ 37. quadrille   | E. a tool used for delicate operations |
| _____ 38. hurdy-gurdy | F. a square dance                      |
| _____ 39. witch hazel | G. superficial and informal            |
| _____ 40. gyro        | H. a strong feeling of love            |

**University Interscholastic League  
2022-23 Dictionary Skills Contest  
Spring District Test — Grades 5 & 6**

**Answer Key**

- |       |       |
|-------|-------|
| 1. C  | 21. C |
| 2. A  | 22. D |
| 3. C  | 23. A |
| 4. D  | 24. B |
| 5. B  | 25. D |
| 6. A  | 26. C |
| 7. D  | 27. B |
| 8. C  | 28. B |
| 9. D  | 29. C |
| 10. B | 30. C |
| 11. C | 31. A |
| 12. D | 32. C |
| 13. A | 33. E |
| 14. A | 34. G |
| 15. C | 35. B |
| 16. B | 36. H |
| 17. D | 37. F |
| 18. B | 38. D |
| 19. B | 39. C |
| 20. D | 40. A |

CONTESTANT NUMBER:

**FOR GRADER USE ONLY**

Score Test Below:

\_\_\_\_\_ out of 75. Initials \_\_\_\_\_

\_\_\_\_\_ out of 75. Initials \_\_\_\_\_

**Papers contending to place:**

\_\_\_\_\_ out of 75. Initials \_\_\_\_\_



**University Interscholastic League  
A+ Listening Contest • Answer Sheet**

*Write your contestant number in the upper right corner, and circle your grade below.*

**Circle Grade Level :            5    6    7    8**

- 1. A    B    C    D
- 2. A    B    C    D
- 3. A    B    C    D
- 4. A    B    C    D
- 5. A    B    C    D
- 6. A    B    C    D
- 7. A    B    C    D
- 8. A    B    C    D
- 9. A    B    C    D
- 10. A    B    C    D
- 11. A    B    C    D
- 12. A    B    C    D
- 13. A    B    C    D

- 14. A    B    C    D
- 15. A    B    C    D
- 16. A    B    C    D
- 17. A    B    C    D
- 18. A    B    C    D
- 19. T    F
- 20. T    F
- 21. T    F
- 22. T    F
- 23. T    F
- 24. T    F
- 25. T    F

## **UIL LISTENING CONTEST - GRADES 5 & 6 INVITATIONAL MEET 2022-2023**

### **Contest Script: "The History of Crayons"**

Every year you were in elementary school, your teacher put one item on your school supply list without fail. What was it? Crayons. It's hard to imagine your life without them. Most kids have crayons at home as well. We've all spent hours carefully choosing just the right piece of that magic wax to fill our pictures with color. Let's find out where the crayon originated and how it has changed throughout the years.

**1:00**

First of all, let's be clear. Crayola did not invent crayons. The idea to add pigment to wax goes back thousands of years. Back before actual crayons were invented, Ancient Egyptian artists combined hot beeswax with colored pigment. They used this to bind the color onto stone by using a heat source such as fire to burn the image into place. This is called Encaustic painting. The word encaustic comes from the ancient Greek language and is a combination of two words which, when combined, mean "to burn in." The encaustic painting technique was described by the Roman scholar Pliny the Elder in his book *Natural History* written in the 1st Century AD. The oldest surviving encaustic paintings are the Romano-Egyptian Fayum mummy portraits from Egypt from approximately 100-300 AD. Encaustic painting is still done today, but it has lost its popularity to other types of painting.

**2:00**

Later records show that Europe was where the modern crayon originated. The first coloring sticks were made of charcoal and oil. This meant that when they were used, the lines were black or dark gray. Eventually, chalky, powdered pigments of various colors replaced the charcoal and gave the artist more options. These were often called pastels. Pastels were used by Leonardo da Vinci in 1495. These were similar to the oil pastels artists use today. There are basically two types of pastels. If they are made of oiled chalk then they are called "oil pastels". If they are made without oil and are a simple pigment mixed with a dry binder, they are just called "pastels." The word "crayon" was first used in 1644. Joseph Lemercier of Paris manufactured and sold a variety of color related products including a drawing instrument he called a crayon. At the same time, manufacturers in Europe found a method of substituting wax for the oil in pastels which

made the new crayons harder and less likely to melt. Early French artists such as Francois Clouet used wax crayons in their art. Clouet used crayons for portraits, becoming so skilled that he caught the attention of Henry V. He was even made a knight! He became the official painter for the royal family. Eventually his entire art career consisted of masterpieces created by using wax crayons.

**3:00**

Franklin Manufacturing Company was one of the earliest commercial crayon manufacturers. They are known to have sold wax crayons since 1883. Their sets were called Rainbow, Radiant, Penguin and Educational. Franklin Manufacturing stayed in business until 1927. Eberhard Faber Pencil Company, which brought German lead pencil-making techniques to the United States, also sold wax crayons in 1883 but their crayons were encased in cedar wood, kind of like map pencils with waxy colored leads. They later switched to all-wax crayons. Charles A. Bowley started selling wax crayons for marking leather in late 1880s. Trying to keep up with the demand for his crayons, he partnered up with American Crayon Company in 1902.

**4:00**

It was 1903 when the modern-day Crayola crayon was first introduced. Before that an average child's crayon was just a stick of colored clay or chalk similar to the colored chalk we have today. It doesn't create a clean, beautiful color. Although oil pastels had long been used by artists, they were expensive and messy. Most children would not have access to them. Alice Binney, a schoolteacher and wife of co-founder Edwin Binney, suggested to her husband that their company manufacture an inexpensive alternative for children. The trade name Crayola was coined by Alice Binney by joining the French word "craie," meaning stick of chalk and "ola" from the word "oleaginous," meaning oily. Edwin Binney was co-owner of Binney & Smith, a small, 21-year-old firm. They were already in the business of making color and owned the rights to a line of red oxides of iron for the red paint used by most farmers on their barns. They also sold lamp black and white chalk. Binney & Smith had been among the first to solve the centuries-old problem of how to manufacture a really black, black. The answer was expensive carbon black. Binney & Smith figured out how to make it inexpensively. At the 1900 Paris Exposition, the company won a gold medal for its carbon black display. In 1902, they introduced the invention of An-Du-Septic Dustless Blackboard Chalk. The new chalk won Binney & Smith another gold medal, at the 1904 St. Louis World's Fair.

By this time, they were very successful selling their products in America's classrooms. Besides chalk, they made slate pencils. This allowed students to write but did not give them the opportunity to add color to their drawings. Because their Easton, Pennsylvania, plant was already making an inexpensive industrial marking crayon out of carbon black and a durable paraffin, it wasn't difficult to create a crayon using colors that appealed to children.

**5:00** The Crayola set for "young artists" was one of the earliest produced. Its twenty-eight colors include celestial blue, golden ochre, rose pink, and burnt sienna. The box contained the words "Young Artists Drawing Crayons, for coloring Maps, Pictures." The rear of the box depicts a girl coloring a piece of art on an easel and lists the crayon colors contained in the box. They soon started selling crayons in 19 different sets with a total of 30 colors and became one of the most well-known companies. In fact, some people even refer to all crayons as Crayolas. When Crayola crayons first became available, one of the original customers was the United States government. Crayola crayons were shipped to schools on Indian reservations across the country.

Binney & Smith weren't the only crayon makers that were successful during that time, however. Joseph Dixon Crucible Co. began making crayons in 1887 and eventually also partnered with American Crayon Company in 1983. They formed the Dixie Ticonderoga Company. This company is still making and selling crayons along with pencils and other writing instruments. Prang Educational Company, founded by Louis Prang who is one of the fathers of art education in United States, manufactured watercolor crayons and sold them from the late 19th to the early 20th century. Milton Bradley Co. sold games, but they also began selling wax crayons in 1895. They continued for almost one hundred years until they were acquired by Hasbro in 1984.

**6:00**

Crayons made today are easy to draw with and far less messy than using pens or markers. They are also quite soft and are not pointed on the ends making them much safer for little children to use. However, students and professional artists often use them because of the wide variety of colors available and their ease of use. The crayons produced by Crayola are nontoxic and the recipe for pigments and wax is a closely guarded secret. What is known, however, is that the pigments are produced from natural sources such as slate, metals, and various types of earth and plants. The pigments start of as powders

that are pounded, ground, filtered, refined, and heated. The temperature determines the shade and color. Since 1903, more than 600 shades of Crayola crayons have been produced.

**7:00**

Once, in 1990, Binney & Smith decided to retire eight of its old colors to make room or more modern and brighter colors. This resulted in picketers protesting the decision. In an effort to appease the picketers, the old colors were re-released in a special holiday collection. More recently, there has been a trend to be more inclusive and sensitive in the colors included in collections. For example, although Indian red was named after a pigment procured from India, they decided to change the name to "chestnut". Prussian blue was changed to midnight blue because most children had never heard of Prussia. The crayon color called "flesh" was renamed peach. In fact, in July 2021, Crayola released a new 24 color collection called "Colors of the World" which was designed to represent over 40 skin tones across the world. This collection was announced in conjunction with the UN World Day for Cultural Diversity for Dialogue and Development.

**8:00**

But, remember that there are always other choices for crayon besides Crayola. Art Crayon Company began in 1922 with its primary crayon line called Sargent. When it was purchased by Mead Paper in 1962, it changed its name to Sargent Art. Since then the company has been purchased several more times. Its primary crayon lines were Sargent, Gothic, and Rainbow. Sargent Art sells a wide variety of products containing bright pigments such a pastels, oil pastels, paints and crayons. One cool startup company, Crazy Crayon, has a line called Eco Stars, recycles old crayons to create new ones. It has been producing crayons since 1993. And, believe it or not, there is even a crayon company which was founded in 2011 in Texas called Crayoleez Crayon which produces lots of different colors to choose from.

That gives us a lot to think about. Who would have thought that such a simple looking stick would have such a colorful background?



**INVITATIONAL 2022-2023**

**A+ ACADEMICS**



University Interscholastic League



**Listening**  
grades 5 & 6

**DO NOT OPEN TEST  
UNTIL TOLD TO DO SO**

UIL LISTENING CONTEST - GRADES 5/6  
INVITATIONAL MEET 2022-2023

TEST

**"The History of Crayons"**

1. What is special about encaustic painting?
  - A. Plant oil is used to keep the chalk from rubbing off.
  - B. Beeswax is added to allow the drawing to be burned in place.
  - C. It was the first type of pastel created by Leonardo DaVinci.
  - D. Carbon black was added to oil to make it the blackest it could be.
2. Franklin Manufacturing company is known to have made crayons beginning in
  - A. 1883
  - B. 1495
  - C. 1644
  - D. 1903
3. The company which brought German lead pencil-making techniques to the United States was named
  - A. American Pencil Manufacturing
  - B. Binney & Smith
  - C. Eberhard Faber Pencil Company
  - D. Ticonderoga Pencil Company
4. An-Du-Septic Dustless Blackboard Chalk won Binney & Smith
  - A. a gold medal at the 1904 St. Louis world's fair
  - B. a contract with the US government for blacker black pencils
  - C. a trophy for the best chalk available at the Paris Exposition
  - D. a spot in the 1908 German Educational Supply exhibition
5. Art Crayon Company began in 1922 with its primary crayon line called
  - A. Mead
  - B. Crazy Crayon
  - C. Eco Stars
  - D. Sargent
6. Although Indian red was named after a pigment procured from India, the makers decided to change the name to
  - A. scarlet
  - B. Prussian magenta
  - C. chocolate
  - D. chestnut
7. In July 2021, Crayola released a new 24 color collection which was designed to represent over 40 skin tones across the world called
  - A. Diversity is Beautiful
  - B. Our Colorful World
  - C. Colors of the World
  - D. The Colors of Diversity

8. The Crayola set for "young artists" contained a total of \_\_\_\_\_ colors.
- A. 28
  - B. 30
  - C. 32
  - D. 38
9. The modern-day Crayola crayon was first introduced in
- A. 1903
  - B. 1927
  - C. 1883
  - D. 1887
10. The word "crayon" was first used in 1644 by
- A. Francois Clouet
  - B. Leonardo DiVinci
  - C. Henry V
  - D. Joseph Lemercier
11. The word encaustic comes from the ancient Greek language and is a combination of two words which, when combined, mean
- A. to encase within
  - B. to burn in
  - C. to cover without
  - D. to bind with
12. The company that brought German crayons encased in cedar wood to the United States was
- A. Eberhard Faber Pencil Company
  - B. Franklin Manufacturing
  - C. Prang Educational Company
  - D. American Crayon Company
13. What did manufacturers in Europe do which made crayons harder and less likely to melt
- A. They replaced the oil in pastels with chalk and pigment.
  - B. They used pigments made from minerals instead of flowers.
  - C. They substituted wax for oil when making colored drawing sticks.
  - D. They heated oil pastels to a high temperature and encased them with wood.
14. Who started selling wax crayons for marking leather in late 1880s partnered up with American Crayon Company in 1902?
- A. Edwin Binney
  - B. Charles Bowley
  - C. Joseph Dixon
  - D. Louis Prang
15. Which cool startup company has a line called Eco Stars which recycles old crayons to create new ones?
- A. Crazy Crayon
  - B. Crayoleez Crayon
  - C. Dixie Crayon
  - D. Eco Crayon

16. Before creating crayons, Binney & Smith were known for all of the following except
- A. red oxide paint for barns
  - B. white chalk
  - C. black printing ink
  - D. lamp black
17. Milton Bradley made crayons for almost one hundred years until they were acquired by Hasbro in the year \_\_\_\_\_.
- A. 1915
  - B. 1984
  - C. 1876
  - D. 1903
18. Art Crayon Company's original crayon line was eventually known by all of the following except:
- A. Sargent
  - B. Gothic
  - C. Rainbow
  - D. Magic

### **True/False**

19. After catching the attention of Henry V, Francois Clouet became the official painter for the royal family and was made a knight.
20. The trade name Crayola was coined by Alice Binney by joining the Italian word "craie," meaning stick of chalk and "ola" from the word "oleagiwax," meaning waxy.
21. Crayola crayons are nontoxic made from a secret combination of wax and pigments produced from natural sources such as slate, metals, and various types of earth and plants which are combined and heated to a specific temperature which determines the shade and color.
22. The oldest surviving encaustic paintings are the Romano-Egyptian Fayum mummy portraits from Egypt from approximately 100-300 AD.
23. The back of the original Crayola crayon box depicts a girl coloring a piece of art on a large sheet of paper on a table and lists the crayon colors contained in the box.
24. Since 1903, more than 600 shades of Crayola crayons have been produced.
25. In 1990, when Crayola decided to retire eight of its old colors to make room for more modern and brighter colors, picketers protested the decision.

UIL LISTENING CONTEST - GRADES 5/6  
INVITATIONAL MEET 2022-2023

**ANSWER KEY**

**"The History of Crayons"**

- |       |       |
|-------|-------|
| 1. B  | 14. B |
| 2. A  | 15. A |
| 3. C  | 16. B |
| 4. A  | 17. C |
| 5. D  | 18. D |
| 6. D  | 19. T |
| 7. C  | 20. F |
| 8. A  | 21. T |
| 9. A  | 22. F |
| 10. D | 23. F |
| 11. B | 24. T |
| 12. A | 25. F |
| 13. C |       |

**UIL LISTENING CONTEST - GRADES 5 & 6  
FALL/WINTER DISTRICT 2022-2023**

**Contest Script- "Buck Owens"**

Country music is as common in Texas as sunshine. Every town has live country music playing somewhere, and nearly every high school has students with aspirations of becoming a country music sensation. One such Texan who made it big in country music was Buck Owens.

Buck Owens was born in Sherman, Texas, as the first-born son of Alvis Edar Owens and his wife, Arkansas native, Maicie Azel Ellington Owens. Sherman is the county seat of Grayson County. Grayson county sits along the Red River which separates Texas from Oklahoma. President Dwight D. Eisenhower was born in Denison which is just south of the river. Alvis Edgar Owens and his wife Maicie were sharecroppers, trying to make a living to support their children.

**1:00**

Sharecropping is a type of farming in which families rent small plots of land from a landowner in return for a portion of their crop, to be given to the landowner at the end of each year. The Owens had a total of 4 children. Mary was born in 1927. On August 12, 1929, the first son was born. His official name was Alvis Edgar Owens, Jr. Two other children would be born later. Melvin was born in 1931, and Dorothy was born in 1934. The family had a donkey that they called Buck. When Alvis Jr. was three or four years old, he walked into the house and announced that his name was also Buck. The family soon became calling him Buck, and the name stuck.

The family moved to Garland where Buck attended public school from grades 1-3. Music was always an important part of their lives. Maicie played the piano and made sure the children were exposed to gospel music by attending church regularly. The children also

**2:00**

had to work the fields as soon as they were old enough in order to help the family financially.

Like many of the classic Depression era Dust Bowl families, Buck's family moved west to Arizona in 1937 and settled in Mesa. While attending school in Mesa, Buck realized that although he disliked schoolwork, by attending school, he could also participate in singing and performing in school plays. As a result, he began to find his way in music at an early age. The life of a sharecropper was hard, and there was rarely enough money to provide food, shelter and clothing. Buck experienced the reality of poverty and did not want to spend the rest of his life struggling. Although he never had lessons, he became proficient on guitar, mandolin, horns and drums. He taught himself to play the electric steel guitar. His father created an amplifier for him out of an old radio. He quit school in the ninth grade in order to help work on his father's farm and spend more time working toward a music career.

**3:00**

In 1945, at the age of 16, Buck co-hosted a radio show called *Buck and Britt*. Buck and his co-host, Theryl Ray Britten, also played country music at local bars and were allowed to pass a hat during the show. His pay would be 10% of whatever was collected in the hat. Eventually they became the resident musicians at a restaurant in Phoenix, Arizona, called the Romo Buffet. His band was called the Mac's Skillet Lickers. The lead singer was named Bonnie Campbell. Buck and Bonnie soon married and started a family naming their first son Buddy.

In the late 1940s, Buck became a truck driver. This job took him through the San Joaquin Valley of California. He fell in love with the town of Bakersfield, and he and his little family eventually settled there in 1951. This location soon allowed him to travel to Hollywood for session recording jobs at Capitol Records. There he played backup for Tennessee Ernie Ford, Wanda Jackson, and many others who went on to become country music legends. He also played with a band called the Orange Blossom Playboys from

**4:00**

1951 to 1958. He was the lead guitar player and singer. He was known for working long shifts and played any type of music he could to get people up and dancing.

**5:00** Although Country Music was where he got his start, Buck was also interested in different genres, or types, of music. Because of his upbringing, he had been exposed to dance-hall music in the Southwest, string band and cowboy music on the Mexican border, and even western swing, rhythm & blues, and rock and roll. Buck enjoyed playing them all. But, there was concern that if he recorded the various genres, he could lose his Country Music following. In order to protect his Country Music career, Buck decided to record using a pseudonym, or alternate identity, Using the name Corky Jones, Owens recorded a rockabilly record called "Hot Dog" for Pep Recording Company.

In 1957, Capitol Records producer Ken Nelson signed Buck to Capitol Records. Two years later, in 1959, Owens' career took off when his song "Second Fiddle" hit number 24 on the Billboard country chart. Soon after that, his song "Under Your Spell Again" made it to number 4. During this time, Buck became friends and coworkers with a young fiddler named Don Rich. This partnership was crucial in Buck's career. Rich continued to work with Owens as a musician, guitarist, and leader of Buck's band, the Buckaroos until he died in 1974. Buck named his band Buckaroos at the suggestion of Merle Haggard. Owens's first #1 hit "Act Naturally," which happened in 1963, was later recorded by the Beatles. Other #1 hits included "Together Again" in 1964 and "I've Got a Tiger By the Tail" in 1965.

**6:00**

During this musical era, most singers recorded their music in recording studios using a paid studio band. However, Buck almost exclusively recorded with his actual road band. This gave his records a live feel and sounded more like his concerts. In addition to Don Rich, Buck's band, the Buckaroos, consisted of pedal steel player Tom Brumley, drummer Willie and bassist Doyle Holly. These band members played on all of Owens's records



**7:00**

from 1963-1967. Even though Capitol records produced the records, Buck would shape and control the band's sound and songs. Owens used a consistent arrangement formula based upon simple storylines, infectious choruses, twangy electric guitar, a heavy drum rhythm and high two part harmonies that featured Owens and Rich. These factors created songs that were popular, sold records, and kept Buck Owens and the Buckaroos on the Billboard charts.

Owens also controlled what happened in his business interests. Because he was determined never to be poor again, he and his partner Harlan Howard formed their own publishing company, Blue Book Music. Blue Book Music controlled Buck's own work as well as that of other Bakersfield writers like Merle Haggard. Buck also invested in radio stations throughout the Southwest. In fact, it was after he became part owner of the radio station KAYE in Tacoma, Washington that he met his friend Don Rich who you learned about earlier. By diversifying his streams of income, Owens assured that he would not fall into financial difficulty again.

**8:00**

After a very successful career including shows at Carnegie Hall and the Fillmore in San Francisco, Buck Owens' popularity began to fade in the 1970s. He was able to remain busy by managing his businesses and becoming a co-host on the television show *Hee Haw*. When CBS canceled the show in 1971, it immediately went into syndication. When a show goes into syndication, that means that a television or radio show is still being created, and it can be purchased for broadcasting to any network that is willing to pay for it. In 1986, Buck left the show, but it continued to stay on the air for another eight years.

In 1988 Dwight Yoakam helped him return to the top of the charts with the duet "Streets of Bakersfield." In early 1993, Buck was diagnosed with oral cancer and lost part of his tongue. In 1996, he was inducted into the Country Music Hall of Fame. That same year

**9:00**

he opened Buck Owens' Crystal Palace, a 500-seat dinner club and museum in Bakersfield, where he performed weekly with the Buckaroos. He had additional health problems in the early 2000s which included pneumonia and a minor stroke in 2004. These health problems had forced him to limit his performances at the Crystal Palace.

On March 25, he had gone to the Crystal Palace to handle some business matters and was walking through the parking lot. As he walked, he encountered a group of people who had driven all day long to hear him perform. Although he had not planned to join the Buckaroos that night, he could not let fans who had gone to such great effort be disappointed. He went back into the Crystal Palace and performed a 90-minute set just for them. That evening after returning home to his ranch just north of Bakersfield, he died in his sleep of a heart attack. He was 76 years old.

**FALL/WINTER DISTRICT 2022-2023**

**A+ ACADEMICS**



University Interscholastic League



**Listening**  
grades 5 & 6

**DO NOT OPEN TEST  
UNTIL TOLD TO DO SO**

UIL LISTENING CONTEST - GRADES 5/6  
FALL/WINTER DISTRICT 2022-2023  
TEST

**"BUCK OWENS"**

1. What was Buck's real first name?  
A. Alvis  
B. Edgar  
C. Melvin  
D. Azel
2. Under what name did Buck record the song *Hot Dog*?  
A. Ken Nelson  
B. Corky Jones  
C. Ernie Ford  
D. Wayne Campbell
3. In what year did Owens' career took off when his song "Second Fiddle" hit number 24 on the Billboard country chart?  
A. 1957  
B. 1958  
C. 1959  
D. 1960
4. In 1988 Dwight Yoakam helped Buck return to the top of the charts with the duet  
A. *Tiger by the Tail*  
B. *Together Again*  
C. *Act Naturally*  
D. *Streets of Bakersfield*
5. Don Rich served Buck in all of the following positions except  
A. guitarist  
B. musician  
C. band leader  
D. booking agent
6. Although he was born in Texas, which state did Buck's family settle in in 1937?  
A. California  
B. Arizona  
C. Tennessee  
D. Utah
7. Which US President was born in Dennison, Texas?  
A. Nixon  
B. Eisenhower  
C. Bush  
D. Johnson
8. In 1945, at the age of 16, Buck co-hosted a radio show called  
A. *Buck and Britt*  
B. *Hee Haw*  
C. *The Buckaroos*  
D. *Romo and Bonnie Show*

9. How old was Buck when he gave himself his nickname?  
A. 2  
B. 3  
C. 5  
D. 7
10. Buck Owens was part-owner in radio station \_\_\_\_\_ in Tacoma, Washington.  
A. KVET  
B. KAYE  
C. KMUS  
D. KNTY
11. Which of Buck's songs was recorded by the Beatles?  
A. *Under Your Spell Again*  
B. *Together Again*  
C. *Act Naturally*  
D. *Streets of Bakersfield*
12. Who sang the high two-part harmony with Buck on records?  
A. Don Rich  
B. Merle Haggard  
C. Tom Brumley  
D. Dwight Yoakum
13. Why did Buck Owens work so hard to diversify his income?  
A. He liked doing many different things and couldn't choose between them.  
B. He wanted to be sure that he made a name for himself in music.  
C. He had come from a poor family and never wanted to hurt for money again.  
D. He used his influence to make sure that his family and friends had jobs.
14. What was different about music that Buck recorded compared to other bands of the day?  
A. Buck and his band recorded their concerts for their albums.  
B. Buck used his band to record in the studio instead of other paid musicians.  
C. Buck's music producer only worked with Buck and his band.  
D. Other bands were more professionally recorded and had a smoother sound.
15. What band did Buck play for between the years 1951 and 1958?  
A. Orange Blossom Boys  
B. the Buckaroos  
C. The Bakersfield Bunch  
D. Mac's Skillet Lickers
16. When he died of a heart attack, Buck Owens was \_\_\_\_\_ years old.  
A. 65  
B. 60  
C. 80  
D. 76
17. In what year did *Hee Haw* go into syndication?  
A. 1968  
B. 1952  
C. 1986  
D. 1971

18. Which of the following instruments did Buck Owens NOT become proficient on as a child?

A. banjo

B. piano

C. drums

C. horns

### **True/False**

19. Because Capitol records produced the records, their studio musicians would shape and control the band's sound and songs using a consistently winning and arrangement formula based upon simple storylines, infectious choruses, twangy electric guitar, and a heavy drum rhythm.

20. On the night that Buck Owens died, he played an impromptu 90-minute set for a group of fans that had driven many hours to hear him.

21. Buck Owens left *Hee Haw* when it went into syndication because it could be purchased for broadcasting to any network that was willing to pay for it.

22. In 1996, Buck was inducted into the Country Music Hall of Fame, and he also opened Buck Owens' Crystal Palace, a 500-seat dinner club and museum in Bakersfield, where he performed weekly with his band.

23. After Buck learned to play the electric steel guitar, his father created an amplifier for him out of an old radio.

24. Buck's job as a stage musician in the San Joaquin Valley town of Bakersfield allowed him to be close enough to Hollywood for session recording jobs at Capitol Records.

25. Sharecropping is a type of farming in which families purchase small plots of land from a landowner using a portion of their crop which is given to the landowner at the end of each year.

UIL LISTENING CONTEST - GRADES 5/6  
FALL/WINTER DISTRICT 2022-2023  
**ANSWER KEY**

**"BUCK OWENS"**

- |       |       |
|-------|-------|
| 1. A  | 14. B |
| 2. B  | 15. A |
| 3. C  | 16. D |
| 4. D  | 17. D |
| 5. D  | 18. B |
| 6. C  | 19. F |
| 7. B  | 20. T |
| 8. A  | 21. F |
| 9. B  | 22. T |
| 10. B | 23. T |
| 11. C | 24. F |
| 12. A | 25. F |
| 13. C |       |

## UIL LISTENING CONTEST - GRADES 5 & 6 SPRING MEET 2022-2023

### Contest Script – “Ferris Wheels”

Studying history is an interesting pastime. By doing a bit of research, you can find out all kinds of fascinating information. Sometimes you find out little known facts that make you stop and wonder. What would things have been like if everyone knew the whole story – not just the part that was written in history books? The story of the Ferris Wheel is one of those stories with an interesting, if not scandalous, back story.

In 1891, the city of Chicago was busily working to prepare to host the world’s fair. This world’s fair would be called the Columbian Exposition and was slated as an opportunity to showcase the latest advances in science and technology. There had been a spirited competition between cities in the United States to receive the honor of hosting the fair.

**1:00**

Chicago was chosen because it was a hub for the railroad. The fair was scheduled to be held in 1893 in order to celebrate the 400th anniversary of Christopher Columbus’s voyage to America.

This was not the first world’s fair held in the United States. In 1876, the Philadelphia Centennial Exposition was held celebrating the 100th anniversary of the United States. It was created to contain a garden layout with many separate buildings to house exhibitions rather than a single large warehouse. The Columbian Exposition was planned to be similar to the Philadelphia Centennial. It was designed to spread over 686 acres along the city’s south lakefront area. The chief planner was Chicago architect Daniel H. Burnham and the designer in chief was Charles B Atwood.

**2:00**

The previous world’s fair had been held in 1889 in Paris, France. It was for that fair that the 1,063-foot Eiffel Tower was built to demonstrate that steel and iron could be used to build sturdy, tall structures. The organizers of the Columbian Exposition in Chicago wanted to out-do the French by including a gigantic attraction that would astonish the world. The fair organizers challenged designers to develop an idea for an attraction that was original, daring, and unique. It is said that a young engineer named George Ferris



heard about the challenge and came up with an idea. He would build a large wheel that people could ride on. Passenger wheels had been around for many years, but they were small and made of wood. He wanted to build the largest wheel ever created. It took him several months to convince the fair organizers, but in 1892 he was given permission to build his wheel.

**3:00**

Ferris's wheel was based on the design of a bicycle wheel. The passenger wheel would have a metal frame that revolved around an axle with long metal spokes which would connect the axle to two steel rims. Passenger cars would be suspended between the two rims. Construction began in January of 1893. He had only 5 months to complete a massive undertaking. Deep concrete foundations had to be poured because the wheel was so heavy. The foundation was 35 feet deep. Then two 140-foot towers were built on top of the foundations that were strong enough to hold up to 5 times the weight of the wheel. Then the massive steel axle, which was more than 45 feet long and weighed 46 tons was suspended between the two towers. After that, the steel skeleton of the wheel was constructed by attaching the circular rims to the axle using long steel spokes. Finally, the passenger cars were connected to the rims of the wheel. These 36 steel and glass cars were each fitted with 40 revolving chairs and were able to hold up to 60 people.

**4:00**

In June of 1893, construction was finally completed. On June 21, Ferris's wheel was opened to the public. Ferris blew a golden whistle and the giant wheel slowly turned. People lined up to pay 50 cents to take the 20-minute ride on the 26 story, 264-foot-tall wheel. The ride gave views an incredible view of the fair. For 50 cents you were able to take two complete revolutions. In six months, 27 million people came to the fair with almost 2 million people taking a ride on the wheel. For all but a handful, the wheel was the tallest thing they'd ever seen. George Ferris had secured his place in history, and large passenger wheels would forever be known as Ferris Wheels.

All of these facts are true. However, there was a controversy surrounding the invention of the Ferris Wheel that not many people know about. This story involves George Ferris and a little-known engineer named William Sommers. Now it's time to know the rest of the story.

**5:00**

As you know, passenger-carrying wheels had been around for a long time. A man named William Somers claimed that he was the one who actually invented them. William Somers was a member of a prominent family in Asbury Park, New Jersey. He claims that he dreamed up the idea of a moving passenger wheel in the winter of 1888. He didn't build one until 1891 and placed it in Atlantic City. He took out a patent for what he called a "Roundabout" in 1893. His Roundabout was actually a 50-foot wooden passenger wheel. He had several of them located in Asbury Park, Coney Island, and Atlantic City. The official name for it was the Observational Roundabout. At 50 feet, it towered above the boardwalk.

People enjoyed the sensation of looking down on the world. Ferris not only knew about Somers's wheels, but it is said that he rode the Roundabout in Atlantic City before submitting his own design for the Ferris Wheel for the Columbian Exposition. The first of Somers wheels was located in Atlantic City. During the second season in Atlantic City, it caught fire and burned to the ground as a result of an exploding gasoline lamp. His second Roundabout was located in Asbury Park and opened only a week after the fire in Atlantic City. In addition to the fire hazard created by using wood to create the wheel, Somers's Invention was extremely loud. It's steam engine was fired by coal and was as loud and dirty as a locomotive engine. The noise was so deafening and the fumes so noxious that residents of Atlantic City complained to their City Council to have it removed. However, the ride had become so popular that the city decided it should remain.

**6:00**

Although Ferris's wheel was made of steel and 5 times taller than the 50-foot Roundabouts, Somers sued Ferris for patent infringement. Although Ferris had told the Columbia Exposition planners and media reporters that he dreamed up the idea for the wheel while eating at a Chicago steakhouse, he admitted in the trial that he had gotten the idea from George Somers after riding his wheel in Atlantic City in 1892. Somers won at trial but lost on appeal. In retaliation, he traveled to Chicago and built his own wheel made of wood right outside the fair's gate. This didn't really help, and in the end, George Ferris became famous, and William Somers did not.

**7:00**

The story doesn't end here. After the Columbian Exposition, George Ferris sued the world's fair owners claiming that they did not pay him his agreed upon share of the profits from ticket sales to the wheel. The legal fees drained his finances. He had the wheel moved to Chicago's Lincoln Park neighborhood in an effort to use the wheel for profit. The wealthy residents of Lincoln Park did not want the wheel in their neighborhood and took George Ferris to court yet again in an effort to prevent it. Although they failed, they were able to block Ferris from selling alcohol near the wheel. This action cut deeply into his ticket sales. In fact, by 1897, Ferris had lost \$700,000, his marriage had failed, and he was forced to declare bankruptcy. He was destitute. He contracted typhoid fever and died, in Pittsburgh, Pennsylvania, on November 26, 1897. He was only 37 years old. It is said that he was cremated, and his ashes remained in the care of a Pittsburgh undertaker for more than a year because he had no one to pay the \$150 needed for a funeral.

The original Ferris Wheel was eventually moved to St Louis, Missouri, where an additional 3 million people thrilled to its excitement at the 1904 Louisiana Purchase Exposition. After the Exposition closed, however, people considered the Wheel an eyesore. The original Ferris Wheel was reduced to scrap metal in 1906.

**8:00**

But the fame of the Wheel and the man whose name it carries, has never died. To this day, every time we see a huge wheel with attached cars, no matter what the world names them – the London Eye, the High Roller in Las Vegas, The Singapore Flyer — we know them as Ferris Wheels.

**SPRING DISTRICT 2022-2023**

**A+ ACADEMICS**



University Interscholastic League



**Listening**  
grades 5 & 6

**DO NOT OPEN TEST  
UNTIL TOLD TO DO SO**

UIL LISTENING CONTEST - GRADES 5/6  
SPRING DISTRICT 2022-2023  
TEST

**“Ferris Wheels”**

1. What was the name of the 1893 World’s Fair?  
A. Philadelphia Centennial Exposition      B. Columbian Exposition  
C. Chicago Exposition      D. Parisian World Exposition
  
2. How many acres did the 1893 World’s Fair cover? \_\_\_\_\_  
A. 686      B. 786  
C. 725      D. 750
  
3. What did the Philadelphia Centennial Exposition celebrate?  
A. the 100<sup>th</sup> anniversary of World’s Fairs  
B. the 100<sup>th</sup> World’s Fair  
C. the 100<sup>th</sup> anniversary of the United States  
D. the 100<sup>th</sup> anniversary of Christopher Columbus’s expedition
  
4. After the World’s Fair ended, what was George Ferris’s reason for suing the Exposition?  
A. They did not pay him the agreed upon percentage of profits.  
B. He wanted to receive credit as the inventor of the Ferris Wheel.  
C. The wheel cost more to build than he was given in profits.  
D. He was not allowed to remove the wheel from the fair grounds.
  
5. Who was the chief planner for the 1893 World’s Fair?  
A. Charles Atwood      B. William Sommers  
C. Marcus Asbury      D. Daniel Burnham
  
6. How tall is the Eiffel Tower?  
A. 2,076 feet      B. 1,063 feet  
C. 947 feet      D. 1,464 feet
  
7. On what date was the Ferris Wheel open to the public?  
A. June 21, 1893      B. January 24, 1893  
C. September 6, 1889      D. October 27, 1891

8. In what city was the first Roundabout located?
- A. Philadelphia
  - B. Atlantic City
  - C. Paris, France
  - D. New York
9. Where was the Ferris Wheel moved to after the World's Fair?
- A. Lincoln Park
  - B. Atlantic City
  - C. St. Louis
  - D. Coney Island
10. In what city did William Sommer's family reside?
- A. Chicago, Illinois
  - B. Atlantic City, New Jersey
  - C. Asbury Park, New Jersey
  - D. Lincoln Park, Illinois
11. In what year did Ferris lose \$700,000, his marriage, and was forced to declare bankruptcy.
- A. 1891
  - B. 1893
  - C. 1895
  - D. 1897
12. How many feet tall was the Observational Roundabout?
- A. 15
  - B. 50
  - C. 30
  - D. 70
13. What signified the start of the first Ferris Wheel?
- A. Ferris blew a golden whistle and the giant wheel slowly turned.
  - B. Ferris's wife broke a bottle of champagne on the wheel in celebration.
  - C. The President of the World's Fair gave a speech.
  - D. Ferris and his wife boarded the first car and rode it around one time.
14. The massive axle of Ferris's wheel was more than
- A. 55 feet in length
  - B. 50 tons in weight
  - C. 45 feet in length
  - D. 140 feet tall
15. Each of the 36 passenger cars contained \_\_\_\_\_ revolving chairs.
- A. 25
  - B. 30
  - C. 35
  - D. 40
16. When it was completely finished, Ferris's wheel stood
- A. 157 feet tall
  - B. 264 feet tall
  - C. 235 feet tall
  - D. 189 feet tall

17. All of the following were difficulties noted with Sommer's Observational Roundabout except
- A. the wheel creaked and moaned as it revolved.
  - B. the wooden structure could catch fire.
  - C. the steam driven coal fired engine was loud.
  - D. the engine produced foul smelling exhaust.
18. What happened to the original Ferris Wheel?
- A. It continues to stand in St. Louis, Missouri, as a memorial to George Ferris.
  - B. It was reduced to scrap metal in 1906.
  - C. It was moved to Las Vegas and is used as a tourist attraction.
  - D. It was sold to pay Ferris's legal fees to a private collector.

### **True/False**

19. For the world's fair held in 1889 in Paris, France, the Eiffel Tower was built to demonstrate that steel and iron could be used to build sturdy, tall structures.
20. During its second season in Atlantic City, George Ferris's wheel caught fire and burned to the ground as a result of an exploding gasoline lamp.
21. During the first 3 months of the World's Fair, 27 million people came to the fair with almost 2 million people taking a ride on the wheel.
22. Because the wealthy residents of Asbury Park did not want the wheel in their neighborhood, they took George Ferris to court and succeeded to block him from constructing a wheel in their park as well as blocking him from selling alcohol near the wheel for safety reasons.
23. Although Ferris had told the Columbia Exposition planners and media reporters that he dreamed up the idea for the wheel while eating at a Chicago steakhouse, he admitted in the trial that he had gotten the idea from George Somers after riding his wheel in Atlantic City in 1892.
24. After contracting typhoid fever at the age of 37, Ferris died and was cremated in Pittsburg Pennsylvania where the undertaker stored his ashes for more than a year because he had no one to pay the \$150 needed for a funeral.
25. The Philadelphia Centennial Exposition was created to contain a garden layout with many separate sitting areas connected by a maze of trails all leading to a single large warehouse which housed exhibitions of scientific discovery.

UIL LISTENING CONTEST - GRADES 5/6  
SPRING DISTRICT 2022-2023  
**ANSWER KEY**

"Ferris Wheels"

- |              |              |
|--------------|--------------|
| <b>1. B</b>  | <b>14. C</b> |
| <b>2. A</b>  | <b>15. D</b> |
| <b>3. C</b>  | <b>16. B</b> |
| <b>4. A</b>  | <b>17. A</b> |
| <b>5. D</b>  | <b>18. B</b> |
| <b>6. B</b>  | <b>19. T</b> |
| <b>7. A</b>  | <b>20. F</b> |
| <b>8. B</b>  | <b>21. F</b> |
| <b>9. A</b>  | <b>22. F</b> |
| <b>10. C</b> | <b>23. T</b> |
| <b>11. D</b> | <b>24. T</b> |
| <b>12. B</b> | <b>25. F</b> |
| <b>13. A</b> |              |



**FOR GRADER USE ONLY**

Score Test Below:

\_\_\_\_\_ Initials \_\_\_\_\_

\_\_\_\_\_ Initials \_\_\_\_\_

Papers contending to place:

\_\_\_\_\_ Initials \_\_\_\_\_



**University Interscholastic League  
A+ Maps/Graphs/Charts Contest • Answer Sheet**

*Write your contestant number in the upper right corner, and circle your grade below.*

**Circle Grade Level:                    5       6       7       8**

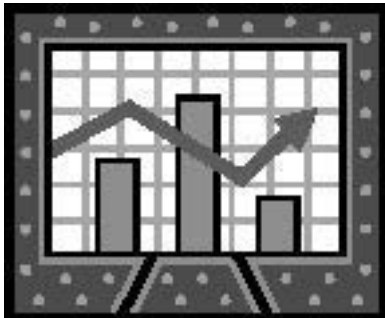
- |       |   |   |   |       |   |       |   |       |   |   |   |
|-------|---|---|---|-------|---|-------|---|-------|---|---|---|
| 1. A  | B | C | D | 26. T | F | 51. A | B | C     | D |   |   |
| 2. A  | B | C | D | 27. T | F | 52. A | B | C     | D |   |   |
| 3. A  | B | C | D | 28. T | F | 53. A | B | C     | D |   |   |
| 4. A  | B | C | D | 29. T | F | 54. A | B | C     | D |   |   |
| 5. A  | B | C | D | 30. T | F | 55. A | B | C     | D |   |   |
| 6. A  | B | C | D | 31. A | B | C     | D | 56. T | F |   |   |
| 7. A  | B | C | D | 32. A | B | C     | D | 57. T | F |   |   |
| 8. A  | B | C | D | 33. A | B | C     | D | 58. T | F |   |   |
| 9. A  | B | C | D | 34. A | B | C     | D | 59. T | F |   |   |
| 10. A | B | C | D | 35. A | B | C     | D | 60. T | F |   |   |
| 11. A | B | C | D | 36. A | B | C     | D | 61. A | B | C | D |
| 12. A | B | C | D | 37. A | B | C     | D | 62. A | B | C | D |
| 13. A | B | C | D | 38. A | B | C     | D | 63. A | B | C | D |
| 14. A | B | C | D | 39. A | B | C     | D | 64. A | B | C | D |
| 15. A | B | C | D | 40. A | B | C     | D | 65. A | B | C | D |
| 16. A | B | C | D | 41. T | F | 66. A | B | C     | D |   |   |
| 17. A | B | C | D | 42. T | F | 67. A | B | C     | D |   |   |
| 18. A | B | C | D | 43. T | F | 68. A | B | C     | D |   |   |
| 19. A | B | C | D | 44. T | F | 69. A | B | C     | D |   |   |
| 20. A | B | C | D | 45. T | F | 70. A | B | C     | D |   |   |
| 21. A | B | C | D | 46. A | B | C     | D | 71. T | F |   |   |
| 22. A | B | C | D | 47. A | B | C     | D | 72. T | F |   |   |
| 23. A | B | C | D | 48. A | B | C     | D | 73. T | F |   |   |
| 24. A | B | C | D | 49. A | B | C     | D | 74. T | F |   |   |
| 25. A | B | C | D | 50. A | B | C     | D | 75. T | F |   |   |

**INVITATIONAL 2022-2023**

**A+ ACADEMICS**



University Interscholastic League



# Maps, Graphs & Charts

grades 5 & 6

**DO NOT OPEN TEST  
UNTIL TOLD TO DO SO**

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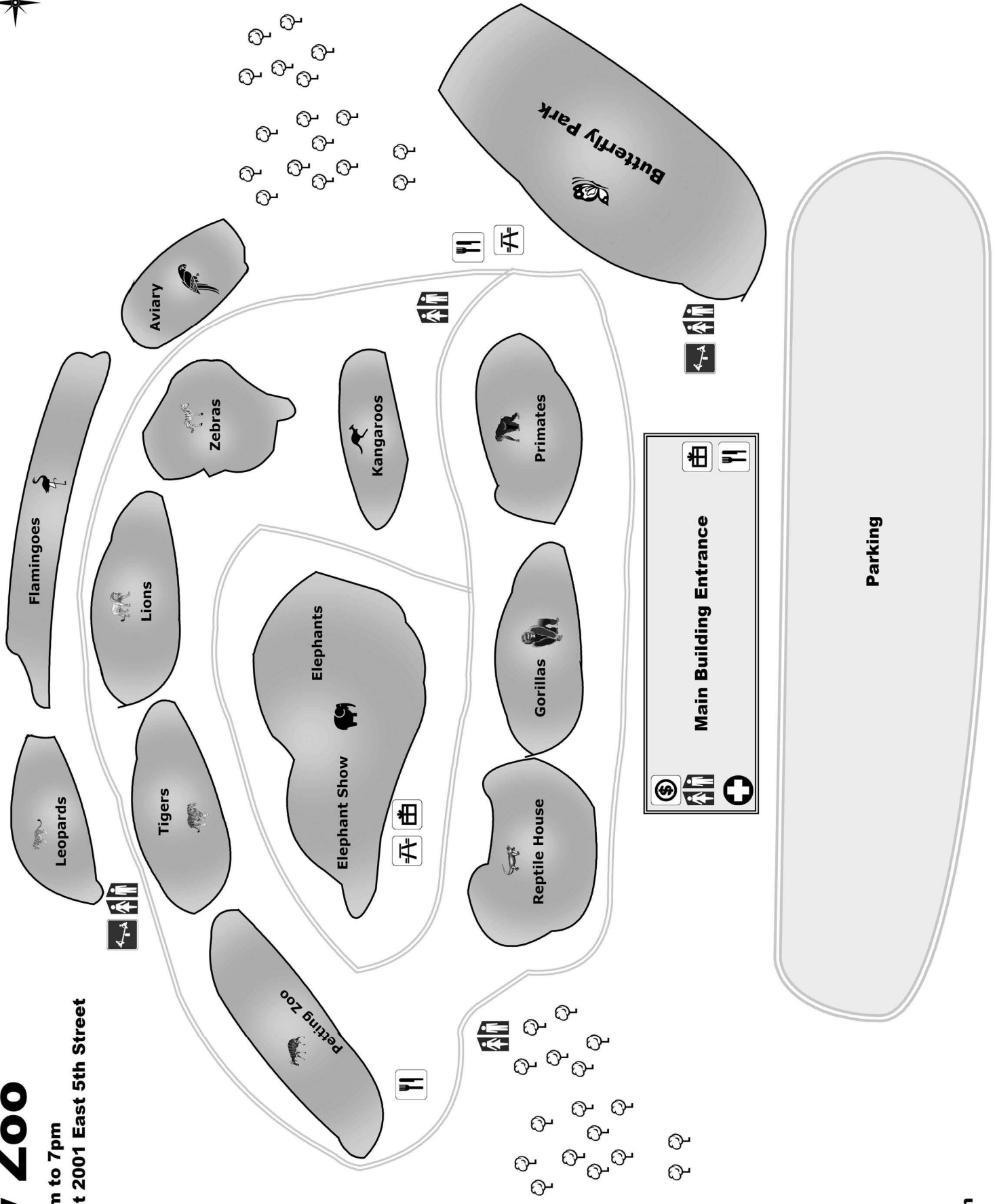
## Africa Political Relief Map









1. What South African island lies between 30°E and 40°E?
  - a. Crozet Island
  - b. Cyprus
  - c. Prince Edward Island
  - d. None of the above
2. What capital city can be found on the western edge of the Gulf of Aden?
  - a. Djibouti
  - b. Dar es Salaam
  - c. Libreville
  - d. Constantine
3. Lake Nyasa forms the border of what country?
  - a. Mozambique
  - b. Tanzania
  - c. Malawi
  - d. All of the above
4. What would a star (not contained in a circle) indicate on the political relief map?
  - a. Small country
  - b. National landmark
  - c. State capital
  - d. Country Capital
5. Which country is not located south of the Equator?
  - a. Lesotho
  - b. Malawi
  - c. Kenya
  - d. Togo
6. The Seychelles Islands are a territory of what country?
  - a. Madagascar
  - b. Somalia
  - c. South Africa
  - d. None of the above
7. Which city has the largest population?
  - a. Kolwezi, Congo
  - b. Kano, Nigeria
  - c. Am Timan, Chad
  - d. Kismayo, Somalia
8. How far is it from the capital of Botswana to the capital of Mozambique?
  - a. About 200 miles
  - b. About 300 miles
  - c. About 400 miles
  - d. About 500 miles
9. The border between Sudan and what other country is a disputed boundary?
  - a. Libya
  - b. Egypt
  - c. Chad
  - d. Ethiopia
10. The longest mountain range is found in what part of the continent?
  - a. North
  - b. South
  - c. East
  - d. West
11. Which of the following is a territory of a European country?
  - a. St. Helena
  - b. Madeira Island
  - c. Crozet Islands
  - d. All of the above
12. The Etosha Pan is an example of what?
  - a. Mountain Peak
  - b. Seasonal Lake
  - c. Canal
  - d. Dam
13. Which town with a population of over one million is the furthest south?
  - a. Hargeysa, Somalia
  - b. Douala, Cameroon
  - c. Omdurman, Sudan
  - d. Casablanca, Morocco
14. The White Nile runs through what country?
  - a. Egypt
  - b. Sudan
  - c. Ethiopia
  - d. None of the above
15. What do similarly colored countries indicate?
  - a. Similar climate
  - b. Similar styles of government
  - c. Similar overall elevations
  - d. None of the above



# County Zoo

Open Daily from 9am to 7pm  
Entrance Located at 2001 East 5th Street

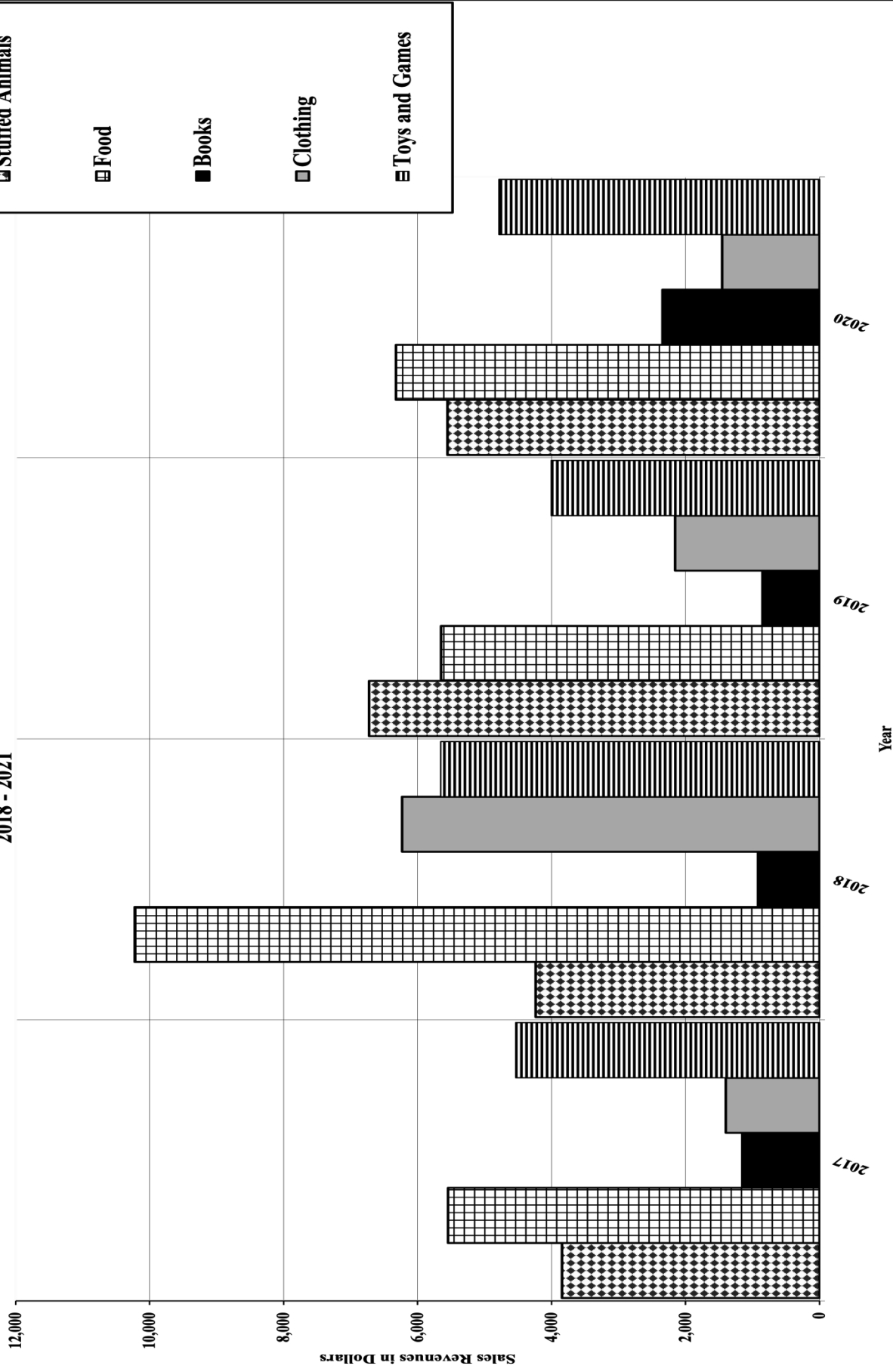


-  **Playground**
-  **Restroom**
-  **Concession**
-  **ATM Machine**
-  **Gift Shop**
-  **Picnic Area**
-  **First Aid**
-  **Water Fountain**

## County Zoo

16. How many picnic areas are located directly north of the Leopard Habitat?
- 0
  - 1
  - 2
  - 3
17. Which of the following can be found in the Main Building/Entrance?
- Restroom
  - Gift Shop
  - Concession
  - All of the above
18. How far is it from the parking lot to the Flamingo Exhibit?
- About 500 feet
  - About 1,000 feet
  - About 3,000 feet
  - Scale not indicated on the map
19. How many picnic areas are indicated on the map?
- 0
  - 1
  - 2
  - 4
20. The Butterfly Park is situated in what portion of the map?
- Southwest
  - Southeast
  - Northwest
  - Northeast
21. How many hours is the zoo open on Sundays?
- 8
  - 10
  - 12
  - The zoo is closed on Sundays.
22. Which of the following has a gift shop next to it?
- The Aviary
  - The Primate Habitat
  - The Elephant Show
  - None of the above
23. Which of the following is located the furthest west?
- Lions Arena
  - Kangaroo Den
  - Gorilla Habitat
  - Petting Zoo
24. Visitors should head in what direction to get back to the main building from the Aviary?
- Southwest
  - Southeast
  - Northwest
  - Northeast
25. Where is the zoo located?
- West 2001 St.
  - East 2001 St.
  - West 5<sup>th</sup> St.
  - East 5<sup>th</sup> St.
- TRUE/FALSE**
26. There are more picnic areas than concessions.
27. The only playground is located west of Butterfly Park.
28. The first aid station is located in the Main Building.
29. The entrance is located on the north side of 10<sup>th</sup> street.
30. The zoo opens every day at the same time.

**Animal Fair-Gift Shop Product Sales  
2018 - 2021**



## County Zoo Gift Shop Revenue

31. How much time is represented on the graph?
- Four months
  - Four years
  - Eight months
  - Eight years
32. What is represented on the y axis?
- The year
  - The number of items sold
  - The price of an item
  - The amount of revenue generated
33. What item group created the least amount of revenue over the period of time covered by the graph?
- Stuffed animals
  - Food
  - Clothing
  - Toys and games
34. Which item had the single biggest increase in revenue from the previous year.
- Stuffed animals
  - Food
  - Clothing
  - Toys and games
35. How many groups of items are represented on the chart?
- 1
  - 2
  - 5
  - 8
36. How many items generated revenue of over \$1,000 in 2019?
- 1
  - 2
  - 4
  - 5
37. How many items generated more revenue than clothing in 2018?
- 0
  - 1
  - 3
  - 4
38. In how many years did food produce revenue above \$5,000?
- 0
  - 1
  - 3
  - 4
39. What year did toys and games generate the most revenue?
- 2017
  - 2018
  - 2019
  - 2020
40. What item had the least variation between 2017 and 2018?
- Books
  - Food
  - Clothing
  - Toys and games

### TRUE/FALSE

41. Food generated the most revenue every year that the graph covers.
42. The graph includes data from four different locations.
43. Books were the only group of items that never generated revenue above \$2,500 in a single year.
44. Only two groups of items generated more than \$20,000 over the time covered by the graph.
45. Stuffed animals were the only item group that increased in revenue created every year.

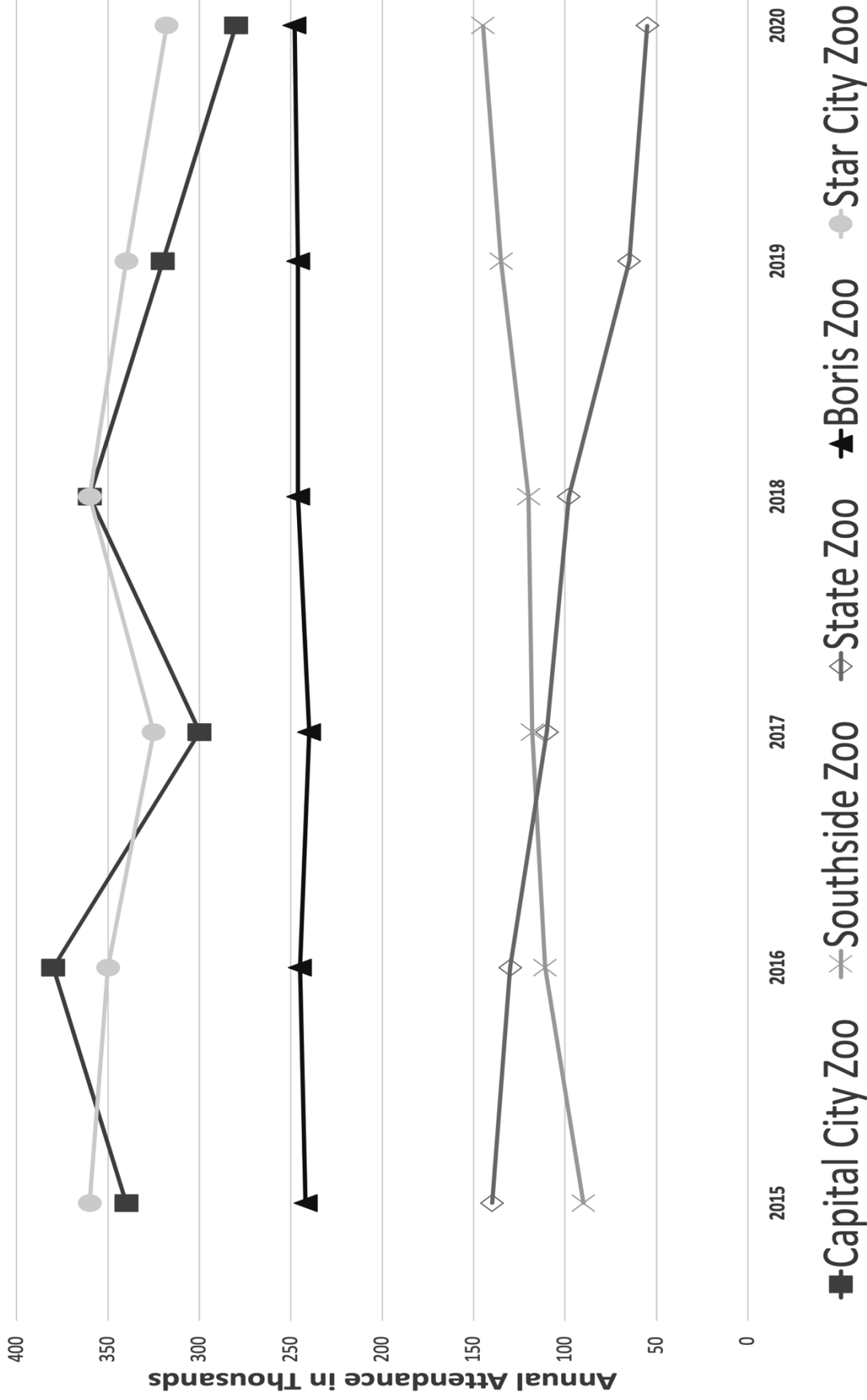


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## Africa (Various Maps)

46. Which country has areas of commercial farming?
- Central African Republic
  - Western Sahara
  - Morocco
  - None of the above
47. The El Djouf desert is on the border of what country?
- Mauritania
  - Sudan
  - Chad
  - None of the above
48. Which of the following countries receives over eighty inches of precipitation per year?
- Namibia
  - Egypt
  - Liberia
  - None of the above
49. Which of the following natural resource can be found in Madagascar?
- Oil
  - Natural gas
  - Lead
  - None of the above
50. Which African city is located on the shores of the Red Sea?
- Jiddah, Saudi Arabia
  - Luxor, Egypt
  - Port Sudan, Sudan
  - Darnah Libya
51. Marine climate can be found in what area of the continent?
- North
  - West
  - South
  - East
52. Algeria gets the most imports from which of the following?
- European Union
  - China
  - United States
  - All others
53. What is the elevation Mt. Tahat in Algeria?
- Between 4,000 and 5,000 feet
  - Between 5,000 and 6,000 feet
  - Between 6,000 and 7,000 feet
  - Over 7,000 feet
54. Which country has an area where the population is over 100 people per square kilometer?
- Egypt
  - South Africa
  - Morocco
  - All of the above
55. Lake Turkana is mainly in what country?
- Uganda
  - Kenya
  - Congo
  - Chad
- TRUE/FALSE**
56. Most African mining companies are foreign-owned and they employ few Africans.
57. The climate of Nigeria is mainly desert.
58. The lowest elevation areas of Africa tend to be around the coastal areas.
59. Africa is between the Atlantic Ocean off of Africa's east coast and the Indian Ocean off the west coast.
60. The Grand Erg de Bilma desert is in located in Niger.

# Zoo Attendance Comparison



## Zoo Attendance Comparison

61. How many zoos are represented on the graph?
- 1
  - 3
  - 5
  - 6
62. What does the line with a square marker represent?
- 2017
  - 2018
  - State Zoo
  - Capital City Zoo
63. Which zoo had the steadiest attendance?
- Southside
  - Boris
  - Star City
  - State
64. Which zoo had the smallest attendance in 2015?
- Capital City Zoo
  - Boris Zoo
  - State Zoo
  - Southside Zoo
65. What year had the highest attendance at any single zoo?
- 2017
  - 2018
  - 2019
  - 2020
66. The data point for Boris Zoo in 2018 indicates what level of attendance?
- 246 attendees
  - 2,460 attendees
  - 24,600 attendees
  - 246,000 attendees
67. In how many years did Star City have higher attendance than Capital City?
- 0
  - 1
  - 2
  - 4
68. What year had the highest level of attendance for all sites combined?
- 2016
  - 2017
  - 2018
  - 2019
69. How many sites had decreasing attendance very year?
- 0
  - 1
  - 2
  - 3
70. What does the x axis represent?
- Number of attendees
  - The month
  - The year
  - The specific attendance number and time.
- TRUE/FALSE**
71. All locations had their lowest attendance in 2020.
72. Attendance never fell below 5,000 at any zoo.
73. Capital City Zoo attendance rose every other year compared to the previous year.
74. Boris Zoo had the second-best attendance level in every year.
75. The graph covers a time span of over three years.



**University Interscholastic League**  
**A+ Maps/Graphs/Charts Contest • 2022-2023**  
**5/6 Invitational**  
**Answer Key**

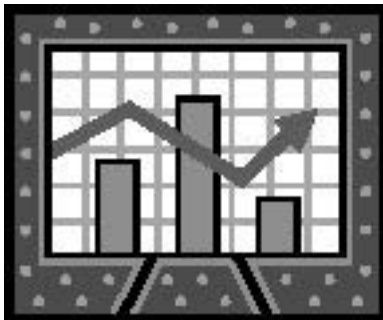
1. C	26. F	51. C
2. A	27. F	52. A
3. D	28. T	53. D
4. C	29. F	54. D
5. D	30. T	55. B
6. D	31. B	56. T
7. B	32. D	57. F
8. C	33. C	58. T
9. B	34. B	59. F
10. A	35. C	60. T
11. D	36. C	61. C
12. B	37. B	62. D
13. B	38. D	63. B
14. B	39. B	64. D
15. D	40. A	65. B
16. A	41. F	66. D
17. D	42. F	67. D
18. D	43. T	68. A
19. C	44. T	69. B
20. B	45. F	70. C
21. B	46. C	71. F
22. C	47. A	72. T
23. D	48. C	73. F
24. A	49. D	74. F
25. D	50. C	75. T

**FALL/WINTER DISTRICT 2022-2023**

**A+ ACADEMICS**



University Interscholastic League



# Maps, Graphs & Charts

grades 5 & 6

**DO NOT OPEN TEST  
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## Europe Political Relief Map

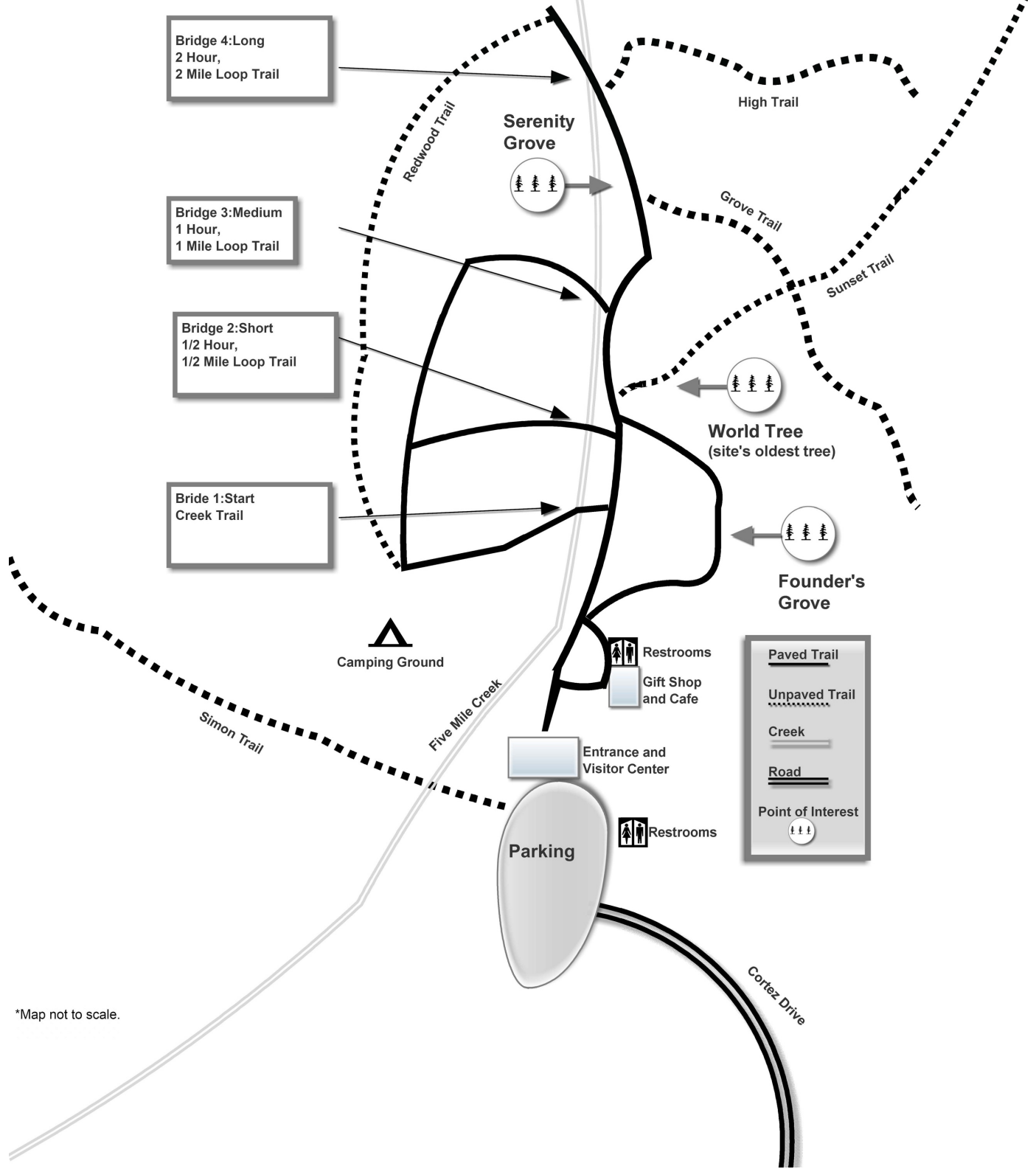
- The Danube River forms part of the border of what country?
  - Estonia
  - Portugal
  - Romania
  - Iceland
- What city with a population of over one million is located at 48°N and 38°E?
  - Volgograd, Russia
  - Donetsk, Ukraine
  - Odessa, Ukraine
  - Voronezh, Russia
- How far is it from the capital of Austria to the capital of Montenegro?
  - About 200 miles
  - About 400 miles
  - About 800 miles
  - About 1,000 miles
- The island of Bornholm is a territory of what country?
  - Denmark
  - Bulgaria
  - Latvia
  - Finland
- The most densely populated country is located on the shores of what sea?
  - Irish Sea
  - North Sea
  - Ligurian Sea
  - Adriatic Sea
- What does the small red square on the eastern coast of Italy indicate?
  - Waterfalls
  - Seasonal lake
  - State capital
  - Small country
- Which French city with a population of over one million is located on the Loire River?
  - Toulouse
  - Nantes
  - Lyon
  - None of the above
- Which of the following countries have canals?
  - France
  - Belarus
  - Ireland
  - All of the above
- Which of the following is located west of the Prime Meridian?
  - Turin, Italy
  - Cork, Ireland
  - Cologne, Germany
  - None of the above
- What is the name of the body of water north of Hammerfest, Norway?
  - North Sea
  - Norwegian Sea
  - Atlantic Ocean
  - Arctic Ocean
- Which of the following countries is intercontinental?
  - Russia
  - Turkey
  - Kazakhstan
  - All of the above
- Which of the following countries has its capital on the shores of the Gulf of Finland?
  - Sweden
  - Russia
  - Denmark
  - Estonia
- The Rhine River runs through what portion of Germany?
  - North
  - West
  - South
  - East
- Bosnia has a disputed border with what country?
  - Croatia
  - Serbia
  - Montenegro
  - None of the above
- Which river is not located in Russia?
  - Ob River
  - Ebro River
  - Oka River
  - Don River



# Cortez Woods

Open To Daily: 7a.m. until 7 p.m.  
 Overnight Camping In Designated Spaces Only  
 (Overnight camping passes for sale only available  
 at [www.cortezwoods.gov](http://www.cortezwoods.gov))

\$15.00-Adult (16 years of age and older)  
 Free-Children (15 years of age and under)  
 Cortez Woods Annual Pass \$45.00 This  
 pass is good for 12 months. It admits the  
 pass holder and three persons (16 and older)

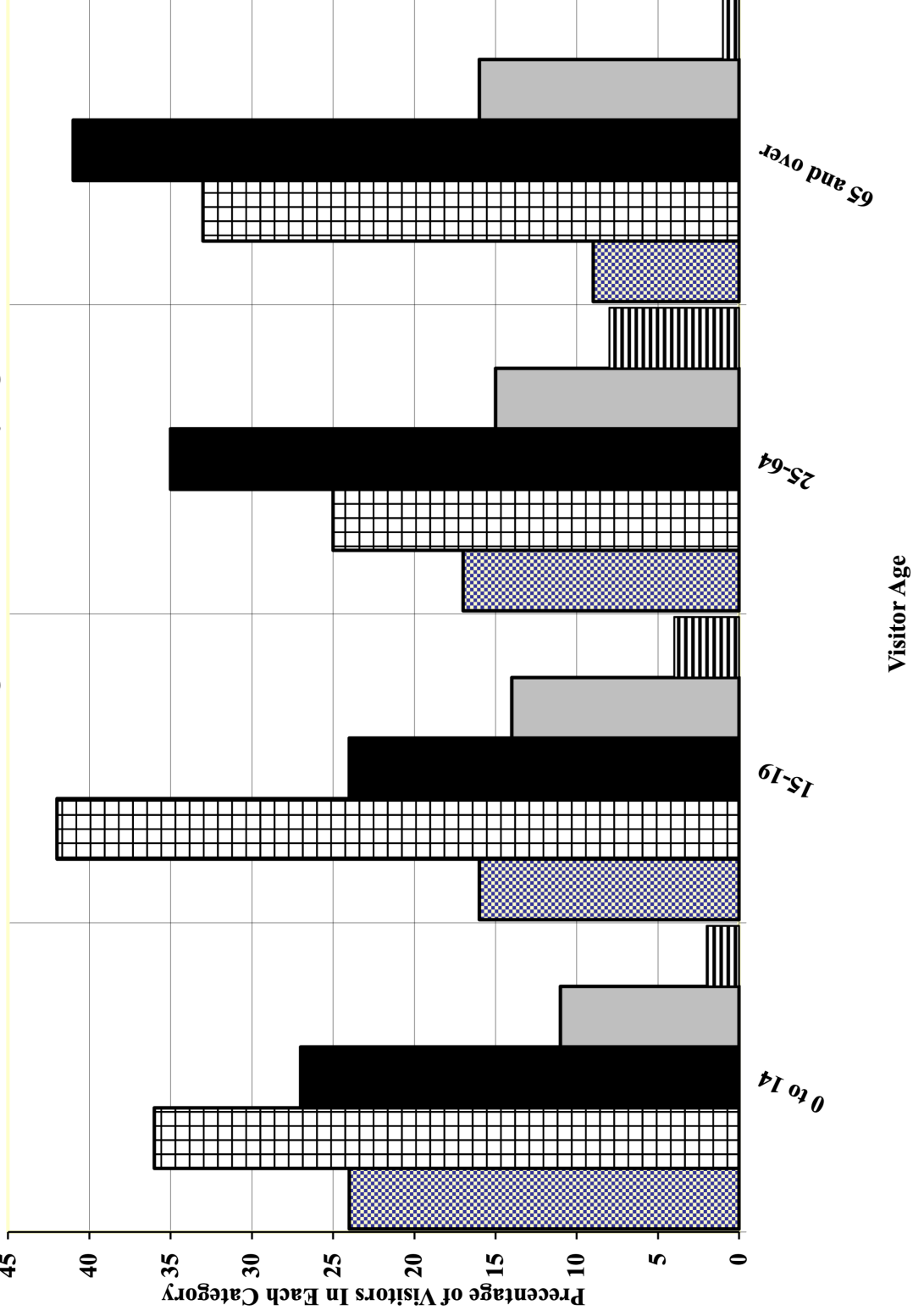


\*Map not to scale.

## Cortez Woods Map

16. Where is the entrance to Cortez Woods located?
- The southern side
  - The western side
  - The northern side
  - The eastern side
17. Which of the following bridges leads to the longest loop trail?
- Bridge 2
  - Bridge 3
  - Bridge 4
  - None of the above
18. Driving in what direction on Cortez Drive takes you to Cortez Woods?
- Southeast
  - Northeast
  - Southwest
  - Northwest
19. How many unpaved trails are indicated?
- 0
  - 1
  - 3
  - 5
20. Which "Point of Interest" is the furthest east?
- Serenity Grove
  - High Trail
  - Founder's Grove
  - Camping Ground
21. How far is it from the parking lot to Serenity Grove?
- About half a mile
  - About a mile
  - About two miles
  - Scale not indicated
22. How many unpaved trails cross Five Mile Creek?
- 0
  - 1
  - 3
  - 5
23. How much in the entrance fee for a fourteen-year-old?
- Admission is free
  - \$15
  - \$45
  - None of the above
24. What trail leads to the World Tree?
- Redwood Trail
  - Sunset Trail
  - High Trail
  - Simon Trail
25. How many restrooms are indicated on the map?
- 0
  - 1
  - 2
  - 3
- TRUE/FALSE**
26. There are four bridges across Five Mile Creek on the paved trails.
27. Overnight camping tickets are available at the Entrance/Visitor Center.
28. Serenity Grove is the only point of interest west of Five Mile Creek.
29. Simon Trail is the only unpaved trail accessible from the parking lot.
30. Overnight campers are free to camp anywhere west of the creek.

**Average Visit Duration By Age in 2020**



## Average Visit Duration by Age in 2020

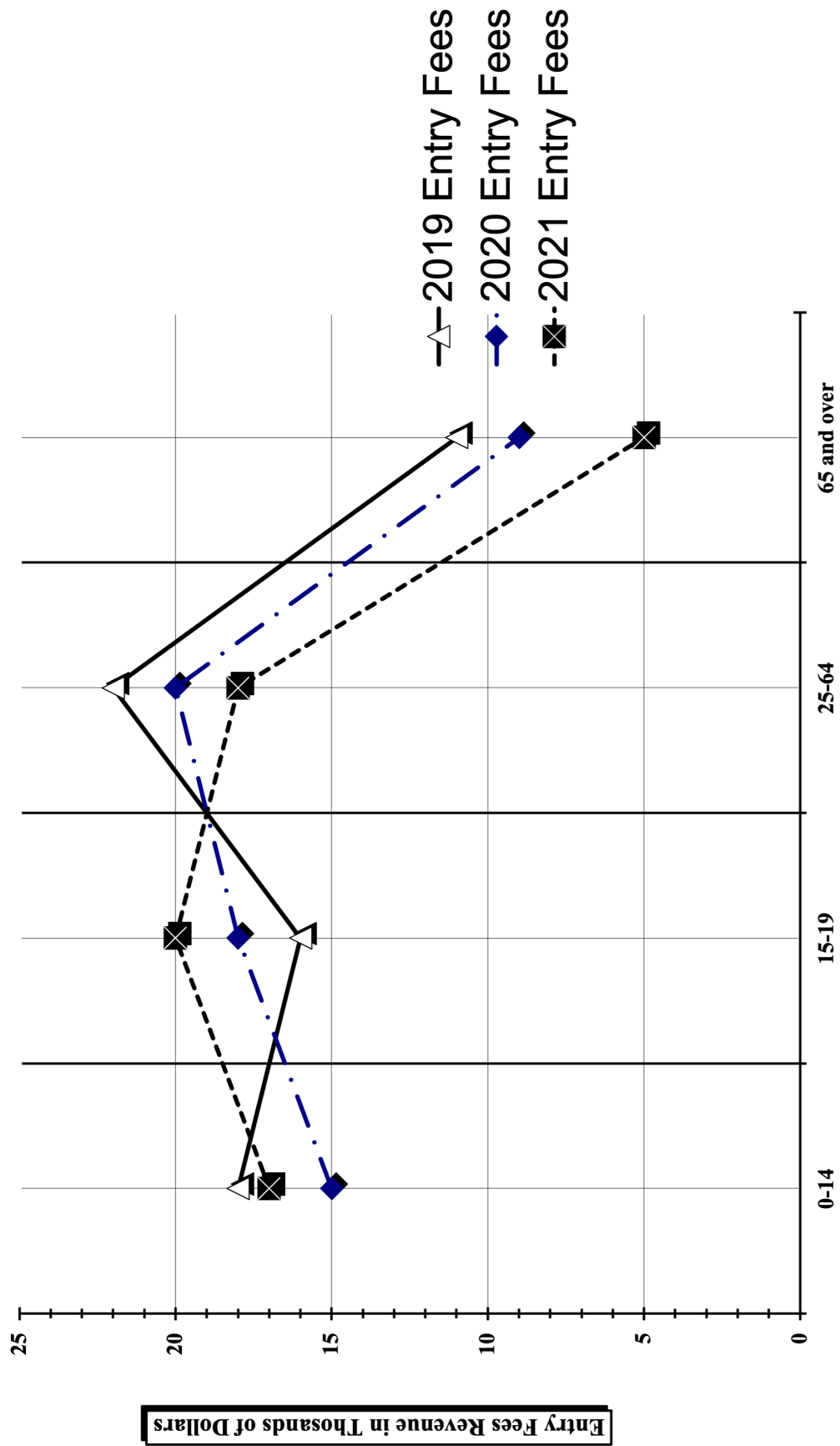
31. What does the black bar represent?
- 15-19 year olds
  - 25-64 year olds
  - Visit durations of 2-3 hours
  - Visit durations of 3-4 hours
32. What does the y axis represent?
- The number of visitors
  - The age group of particular visitors
  - The percentage of visitors in a particular category
  - None of the above
33. Which age group had the highest percentage of visits of four or more hours?
- 0-14
  - 15-19
  - 25-64
  - 65 and over
34. What span of time does the graph cover?
- One year
  - Five years
  - Sixty-five and over
  - One day
35. What visit duration is most common for the oldest age group?
- Visit durations of 0-1 hours
  - Visit durations of 1-2 hours
  - Visit durations of 2-3 hours
  - Visit durations of 3-4 hours
36. How many age groups are represented?
- 1
  - 2
  - 4
  - 5
37. In how many age groups were 1-2 hour visits the most common?
- 0
  - 1
  - 2
  - 4
38. In how many age groups was the percentage of 1-2 hour visits at least double that of 3-4 hour visits?
- 0
  - 1
  - 3
  - 4
39. What duration of visit was the lowest among the most age groups?
- Visit durations of 0-1 hours
  - Visit durations of 1-2 hours
  - Visit durations of 2-3 hours
  - Visit durations of 4 or more hours
40. Which age group had the highest amount of total visitors?
- 0-14
  - 15-19
  - 25-64
  - Data not available
- TRUE/FALSE**
41. Total percentage totals of all visit durations for each age group equals 100%
42. One hour or less visit durations were most common across three of the four age groups.
43. The 15-19 age group was had the highest percentage of 2-3 hour visits.
44. Someone in the youngest age group is the most likely to leave after less than an hour.
45. The 25-64 age group had the least difference between the highest and lowest amount of visit duration percentage.

## Europe (Various Maps)

46. The largest lake on the continent is on the border of which country?
- United Kingdom
  - Finland
  - Russia
  - Spain
47. What is the main land cover type of Sweden?
- Tundra
  - Glacier
  - Cropland
  - Needleleaf Forest
48. Which of the following countries gets its highest percentage of electricity from fossil fuels?
- Germany
  - Poland
  - Spain
  - Austria
49. How far is it from Bilbao, Spain to Valladolid, Spain?
- About 150 miles
  - About 300 miles
  - About 450 miles
  - About 600 miles
50. What does a line of white dots on a Political Relief map indicate?
- International boundary
  - Continental boundary
  - Canal
  - State boundary
51. Which of the following Swedish cities is located north of the Arctic Circle?
- Bodo
  - Vadso
  - Kiruna
  - None of the above
52. Which of the following has negative population growth?
- Russia
  - Albania
  - France
  - The World
53. Which of the following countries has a marine climate?
- Moldovia
  - Estonia
  - Bosnia
  - Belgium
54. Wetlands can be found in what country?
- Russia
  - Finland
  - Estonia
  - All of the above
55. What is the world's largest country?
- Canada
  - China
  - Russia
  - Spain
- TRUE/FALSE**
56. Lake Inari is located in Northern Finland.
57. The elevation on the coast of the Netherlands can reach above 5,000 feet.
58. The single country that receives the highest amount of European Union exports is the United States.
59. The least densely populated country is Iceland.
60. The Ural Mountains create the intercontinental boundary inside of Turkey.

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Entry Fee Revenue 2019 through 2021 by Age Category



## Entry Fee Revenue

61. What does the line with the triangle represent?
- Amount of revenue generated
  - 0-14 Age group
  - 2019 entry fees
  - None of the above
62. What year did the 15-19 age group generate the most revenue?
- 2017
  - 2019
  - 2020
  - 2021
63. What do the numbers on the left side of the graph represent?
- Year
  - Revenue in thousands of dollars
  - Age groups
  - None of the above
64. Which age group generated the most in 2020?
- 0-14
  - 15-19
  - 25-64
  - 65 and over
65. In what year was the most revenue generated?
- 2019
  - 2020
  - 2021
  - Information not available
66. How much did revenue in the 65 and over age group drop in 2021 compared to the previous year?
- About \$2,000
  - About \$4,000
  - About \$6,000
  - About \$8,000
67. In how many years did the youngest age group draw in more revenue than the oldest age group?
- 0
  - 1
  - 2
  - 3
68. In what year did attendance for all age groups generate at least \$15,000?
- 2019
  - 2020
  - 2021
  - None of the above
69. What age group saw an increase in revenue every year?
- 0-14
  - 15-19
  - 25-64
  - 65 and over
70. In what year did revenue from the 0-14 age group peak?
- 2019
  - 2020
  - 2021
  - Information not available

### TRUE/FALSE

71. Revenue from the 65 and over group was always the lowest.
72. Revenue from most groups never fell below \$15,000 in a single year.
73. The age group that reached over \$20,000 in revenue the most years was the 15 -19 age group.
74. Two age groups saw decreases every year.
75. The 15-19 age group generated more revenue than the 0-14 age group every year.





**University Interscholastic League**  
**A+ Maps/Graphs/Charts Contest • 2022-2023**  
**5/6 Fall**  
**Answer Key**

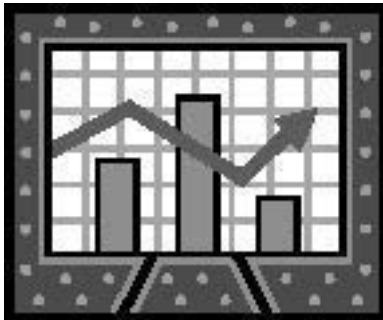
<b>1. C</b>	<b>26. T</b>	<b>51. C</b>
<b>2. B</b>	<b>27. F</b>	<b>52. A</b>
<b>3. B</b>	<b>28. F</b>	<b>53. D</b>
<b>4. A</b>	<b>29. T</b>	<b>54. D</b>
<b>5. C</b>	<b>30. F</b>	<b>55. C</b>
<b>6. D</b>	<b>31. C</b>	<b>56. T</b>
<b>7. D</b>	<b>32. C</b>	<b>57. F</b>
<b>8. D</b>	<b>33. C</b>	<b>58. T</b>
<b>9. B</b>	<b>34. A</b>	<b>59. T</b>
<b>10. D</b>	<b>35. C</b>	<b>60. F</b>
<b>11. D</b>	<b>36. C</b>	<b>61. C</b>
<b>12. D</b>	<b>37. C</b>	<b>62. D</b>
<b>13. B</b>	<b>38. C</b>	<b>63. B</b>
<b>14. D</b>	<b>39. D</b>	<b>64. C</b>
<b>15. B</b>	<b>40. D</b>	<b>65. A</b>
<b>16. A</b>	<b>41. T</b>	<b>66. B</b>
<b>17. C</b>	<b>42. F</b>	<b>67. D</b>
<b>18. D</b>	<b>43. F</b>	<b>68. D</b>
<b>19. D</b>	<b>44. T</b>	<b>69. B</b>
<b>20. C</b>	<b>45. T</b>	<b>70. A</b>
<b>21. D</b>	<b>46. C</b>	<b>71. T</b>
<b>22. B</b>	<b>47. D</b>	<b>72. T</b>
<b>23. A</b>	<b>48. B</b>	<b>73. F</b>
<b>24. B</b>	<b>49. A</b>	<b>74. T</b>
<b>25. C</b>	<b>50. B</b>	<b>75. F</b>

**SPRING DISTRICT 2022-2023**

**A+ ACADEMICS**



University Interscholastic League



# Maps, Graphs & Charts

grades 5 & 6

**DO NOT OPEN TEST  
UNTIL TOLD TO DO SO**

## Europe Political Relief Map

- Which of the following Russian cities is on the shores of a river?
  - Orel
  - Kursk
  - Tver
  - All of the above
- What is the capital of Germany?
  - Bonn
  - Prague
  - Berlin
  - Hamburg
- What country is Lake Vanern located in?
  - Russia
  - Spain
  - Ukraine
  - None of the above
- Which of the following is west of the Prime Meridian?
  - Black Sea
  - Guadiana River
  - Barents Sea
  - None of the above
- Rockall Island is a territory of what country?
  - Russia
  - United Kingdom
  - Sweden
  - Ireland
- What does a line of red dots on the map represent?
  - Continental boundary
  - International boundary
  - Disputed boundary
  - State boundary
- What is the name of the body of water on the northern tip of Estonia?
  - Gulf of Finland
  - White Sea
  - Aegean Sea
  - Ural River
- What country is Lapland located in?
  - Finland
  - Russia
  - Sweden
  - All of the above
- Canals run through which of the following French cities?
  - Dublin
  - Toulouse
  - Limoges
  - Lyon
- What of the following cities with a population of over one million is the furthest west?
  - Istanbul, Turkey
  - Belfast, Northern Ireland
  - Milan, Italy
  - Porto, Portugal
- What country's capital can be found at 50°N?
  - Russia
  - Czech Republic
  - Croatia
  - None of the above
- Which of the following countries is landlocked?
  - Iceland
  - Austria
  - Albania
  - Portugal
- How many countries are located inside Italy?
  - 0
  - 1
  - 2
  - 3
- Which of the following rivers runs through Russia?
  - Thames River
  - Rhine River
  - Bug River
  - Ural River
- Which statement about the Sea of Marmara is true?
  - It is located in southern Russia
  - It is the largest sea in Europe
  - It separates the European portion of Turkey from the Asian portion of Turkey
  - It creates the northern border of Turkey.

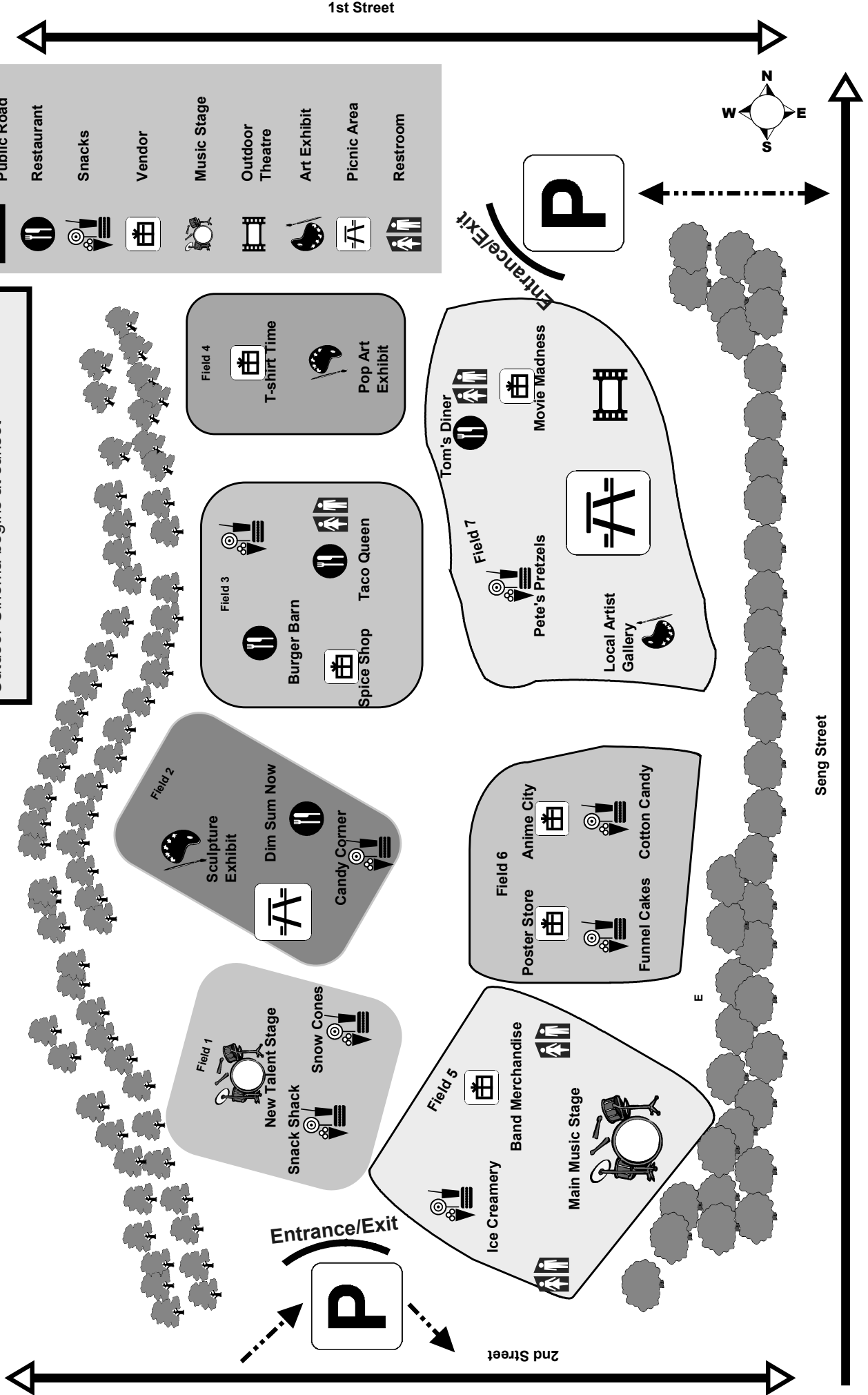
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# Center City Music, Food and Arts Festival

Seng Street Site  
[www.centercityarts.org](http://www.centercityarts.org)

Gates Open at 3 p.m. Gates close at 11 p.m.  
 Live music from 4 p.m. to 10 p.m.  
 Outdoor Cinema begins at sunset

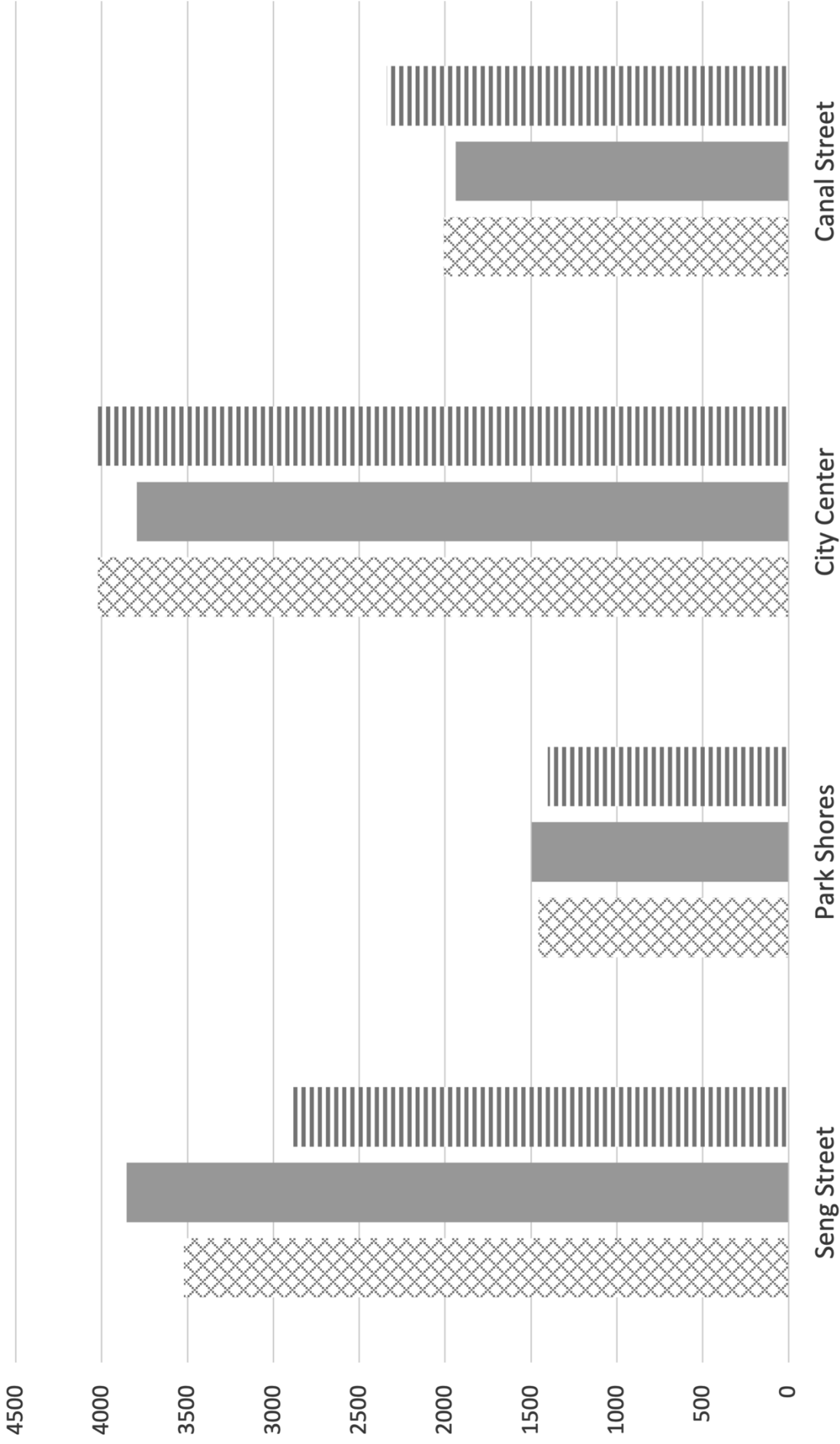
Private Road	Public Road	Restaurant	Snacks	Vendor	Music Stage	Outdoor Theatre	Art Exhibit	Picnic Area	Restroom



## Center City Music, Food and Arts Festival

16. How many art exhibits are located at the Seng Street site?
- 0
  - 1
  - 2
  - 3
17. The parking lot at 1<sup>st</sup> and Seng is accessible by heading what direction on Seng Street?
- North
  - South
  - East
  - West
18. What category does the Spice Shop fall under?
- Vendor
  - Restaurant
  - Snacks
  - Art exhibit
19. The exit in the south parking lot heads in what direction?
- Northeast
  - Northwest
  - Southeast
  - Southwest
20. What time does live music begin?
- 3 p.m.
  - 4 p.m.
  - Sunset
  - 11 p.m.
21. How many other sites are involved in the festival?
- 0
  - 4
  - 6
  - Not indicated
22. How many restrooms are located next to restaurants?
- 0
  - 1
  - 2
  - 3
23. Which art exhibit is the furthest west?
- New Talent Stage
  - Sculpture Exhibit
  - Local Artist Gallery
  - Pop Art Exhibit
24. How many public roads are represented on the map?
- 0
  - 1
  - 2
  - 3
25. Which field has the most vendors?
- 1
  - 2
  - 5
  - 6
- TRUE/FALSE**
26. Snacks are located on every field.
27. Most of the public roads on the map are two way streets.
28. The outdoor theatre is located near the south parking lot.
29. Gates open an hour before live music starts and ends an hour after live music ends.
30. There are more vendors than restaurants.

# Art Festival Attendance by Year and Site



⊗ 2019 ■ 2020 ≡ 2021

## Art Festival Attendance by Year and Site

31. How many sites are indicated on the graph?
- 0
  - 1
  - 3
  - 4
32. What does the x axis represent?
- Individual sites
  - The year
  - Number of attendees
  - None of the above
33. Which site had the least amount of variation in attendance from year to year?
- City Center
  - Canal Street
  - Park Shores
  - Seng Street
34. What span of time is covered by the graph?
- Three days
  - Three weeks
  - Three months
  - Three years
35. What year did City Center have the lowest attendance?
- 2018
  - 2019
  - 2020
  - 2021
36. What year had the highest attendance for all sites combined?
- 2018
  - 2019
  - 2020
  - 2021
37. What site had the highest attendance in a single year?
- City Center
  - Canal Street
  - Park Shores
  - Seng Street
38. How many sites had their lowest attendance in 2020?
- 0
  - 1
  - 2
  - 3
39. What does the darkest column represent?
- Seng Street
  - Park Shores
  - 2019
  - 2020
40. In how many years did Seng Street have the highest attendance
- 0
  - 1
  - 2
  - 3
- TRUE/FALSE**
41. Park Shores had the lowest attendance every year.
42. Total yearly attendance for all sites combined stayed above 10,000.
43. City Street had at least twice the number of attendees as Park Shores every year.
44. Attendance at any site never rose above 4,000 in a single year.
45. Seng Street only had more attendees than City Center in two years.



## Europe (Various Maps)

46. Which of the following has areas below sea level?

- a. Spain
- b. Czech Republic
- c. Kazakhstan
- d. Hungary

47. Where is Siberia located?

- a. Sweden
- b. Ireland
- c. Greece
- d. Russia

48. Which of the following countries has a marine climate?

- a. France
- b. Italy
- c. Turkey
- d. Estonia

49. Aland Island is a territory of what country?

- a. Russia
- b. Finland
- c. Denmark
- d. Lithuania

50. How far is it from Munich, Germany to Frankfurt, Germany?

- a. About 100 miles
- b. About 200 miles
- c. About 400 miles
- d. About 800 miles

51. What is the most widespread type of land use in Belarus?

- a. Urban
- b. Commercial farming
- c. Forestry
- d. Ranching

52. The highest peak on the continent is located in what country located?

- a. France
- b. Ireland
- c. Spain
- d. Russia

53. What percentage of Iceland's electric energy comes from geothermal power?

- a. About 10%
- b. About 25%
- c. About 50%
- d. About 75%

54. Which of the following city's airports serves over 35 million passengers per year?

- a. Paris, France
- b. Moscow, Russia
- c. Oslo, Norway
- d. All of the above

55. What country capital is located on the shores of West Dvina River?

- a. Russia
- b. Norway
- c. Latvia
- d. Denmark

### TRUE/FALSE

56. Canals are located just north of Lake Ladoga.

57. The land area of Asian Russia is more than twice that of European Russia.

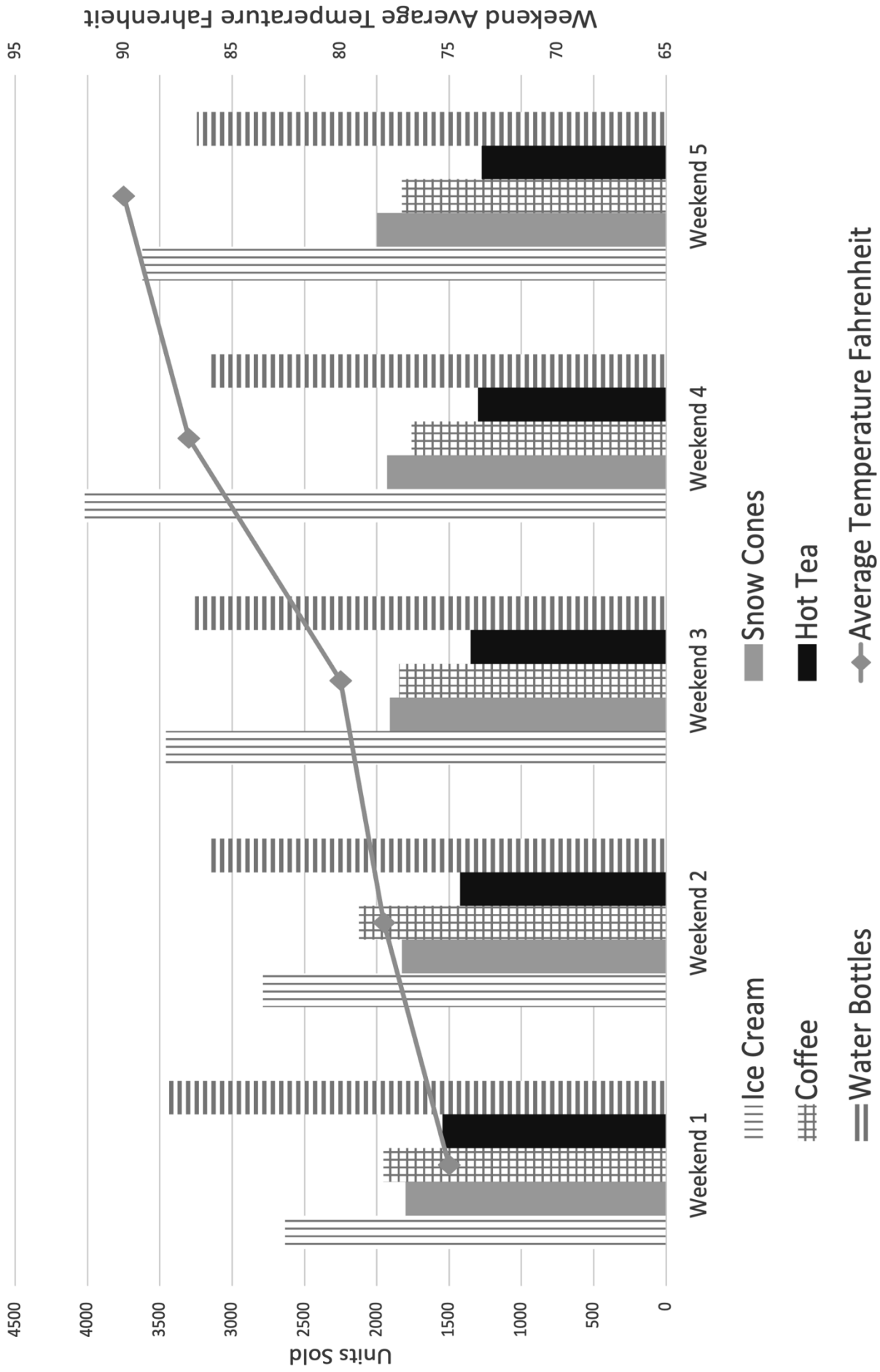
58. Polders are areas of land that have been lost to rising sea level.

59. Most of Spain's coastline is on the shores of the Atlantic Ocean.

60. Aluminum can be found in Italy.

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# Art Festival Drink/Snack Sales



## Art Festival Drink/Snack Sales

61. What does the x axis represent?
- Number of units sold
  - Price of individual items
  - A particular weekend
  - The year
62. What does the darkest column represent?
- Ice cream
  - Hot tea
  - Water bottles
  - Snow cones
63. How many items sold more than 3,000 units more than one weekend?
- 0
  - 1
  - 2
  - 3
64. What do the numbers on the right side of y axis represent?
- Number of units sold
  - Price of individual items
  - A particular weekend
  - Temperature
65. What amount of time is covered by the graph?
- One year
  - One month
  - Five weeks
  - Five weekends
66. What weekend were the most snow cones sold?
- Weekend 1
  - Weekend 2
  - Weekend 4
  - Weekend 5
67. What item had the highest amount of sales Weekend 3?
- Ice cream
  - Coffee
  - Hot Tea
  - Water bottles
68. What does the line crossing across the columns represent?
- Low temperature
  - High temperature
  - Average temperature
  - Units sold
69. Sales of how many items rose every weekend?
- 0
  - 1
  - 2
  - 3
70. Weekend four saw the lowest sales for how many items?
- 0
  - 1
  - 3
  - 4
- TRUE/FALSE**
71. Temperatures rose every weekend.
72. Ice cream hit the highest amount of single item sales over a single weekend.
73. Coffee sales increased every time average weekend temperature increased.
74. Water bottles were the only item that sold more than 3,000 units every weekend.
75. Hot tea sold the least amount every weekend.



**University Interscholastic League**  
**A+ Maps/Graphs/Charts Contest • 2022-2023**  
**5/6 Spring**  
**Answer Key**

<b>1. D</b>	<b>26. F</b>	<b>51. B</b>
<b>2. C</b>	<b>27. T</b>	<b>52. D</b>
<b>3. D</b>	<b>28. F</b>	<b>53. C</b>
<b>4. B</b>	<b>29. T</b>	<b>54. A</b>
<b>5. B</b>	<b>30. T</b>	<b>55. C</b>
<b>6. C</b>	<b>31. D</b>	<b>56. F</b>
<b>7. A</b>	<b>32. A</b>	<b>57. T</b>
<b>8. D</b>	<b>33. C</b>	<b>58. F</b>
<b>9. B</b>	<b>34. D</b>	<b>59. F</b>
<b>10. C</b>	<b>35. C</b>	<b>60. T</b>
<b>11. B</b>	<b>36. C</b>	<b>61. C</b>
<b>12. B</b>	<b>37. A</b>	<b>62. B</b>
<b>13. C</b>	<b>38. C</b>	<b>63. C</b>
<b>14. D</b>	<b>39. C</b>	<b>64. D</b>
<b>15. C</b>	<b>40. B</b>	<b>65. D</b>
<b>16. D</b>	<b>41. T</b>	<b>66. D</b>
<b>17. A</b>	<b>42. T</b>	<b>67. A</b>
<b>18. A</b>	<b>43. T</b>	<b>68. C</b>
<b>19. C</b>	<b>44. F</b>	<b>69. B</b>
<b>20. B</b>	<b>45. F</b>	<b>70. B</b>
<b>21. D</b>	<b>46. C</b>	<b>71. T</b>
<b>22. C</b>	<b>47. D</b>	<b>72. T</b>
<b>23. B</b>	<b>48. A</b>	<b>73. F</b>
<b>24. D</b>	<b>49. B</b>	<b>74. T</b>
<b>25. D</b>	<b>50. B</b>	<b>75. T</b>

CONTESTANT NUMBER:

**FOR GRADER USE ONLY**

Score Test Below:

\_\_\_\_\_ out of 250. Initials \_\_\_\_\_

\_\_\_\_\_ out of 250. Initials \_\_\_\_\_

**Papers contending to place:**

\_\_\_\_\_ out of 250. Initials \_\_\_\_\_



**University Interscholastic League  
A+ Mathematics Contest • Answer Sheet**

*Write your contestant number in the upper right corner, and circle your grade below.*

**Circle Grade Level:**

**6      7      8**

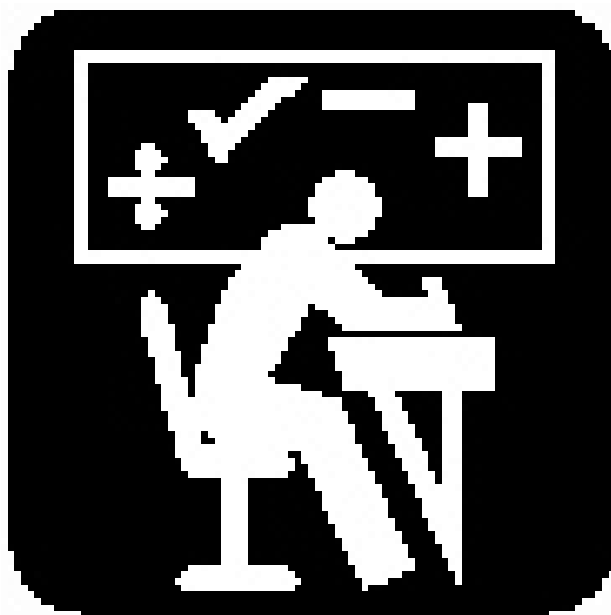
- |     |   |   |   |   |   |     |   |   |   |   |   |
|-----|---|---|---|---|---|-----|---|---|---|---|---|
| 1.  | A | B | C | D | E | 26. | A | B | C | D | E |
| 2.  | A | B | C | D | E | 27. | A | B | C | D | E |
| 3.  | A | B | C | D | E | 28. | A | B | C | D | E |
| 4.  | A | B | C | D | E | 29. | A | B | C | D | E |
| 5.  | A | B | C | D | E | 30. | A | B | C | D | E |
| 6.  | A | B | C | D | E | 31. | A | B | C | D | E |
| 7.  | A | B | C | D | E | 32. | A | B | C | D | E |
| 8.  | A | B | C | D | E | 33. | A | B | C | D | E |
| 9.  | A | B | C | D | E | 34. | A | B | C | D | E |
| 10. | A | B | C | D | E | 35. | A | B | C | D | E |
| 11. | A | B | C | D | E | 36. | A | B | C | D | E |
| 12. | A | B | C | D | E | 37. | A | B | C | D | E |
| 13. | A | B | C | D | E | 38. | A | B | C | D | E |
| 14. | A | B | C | D | E | 39. | A | B | C | D | E |
| 15. | A | B | C | D | E | 40. | A | B | C | D | E |
| 16. | A | B | C | D | E | 41. | A | B | C | D | E |
| 17. | A | B | C | D | E | 42. | A | B | C | D | E |
| 18. | A | B | C | D | E | 43. | A | B | C | D | E |
| 19. | A | B | C | D | E | 44. | A | B | C | D | E |
| 20. | A | B | C | D | E | 45. | A | B | C | D | E |
| 21. | A | B | C | D | E | 46. | A | B | C | D | E |
| 22. | A | B | C | D | E | 47. | A | B | C | D | E |
| 23. | A | B | C | D | E | 48. | A | B | C | D | E |
| 24. | A | B | C | D | E | 49. | A | B | C | D | E |
| 25. | A | B | C | D | E | 50. | A | B | C | D | E |

**INVITATIONAL 2022-2023**

**A+ ACADEMICS**



University Interscholastic League



# Mathematics

**DO NOT OPEN TEST  
UNTIL TOLD TO DO SO**

# 2022 – 2023 University Interscholastic League JH/MS Mathematics Contest A

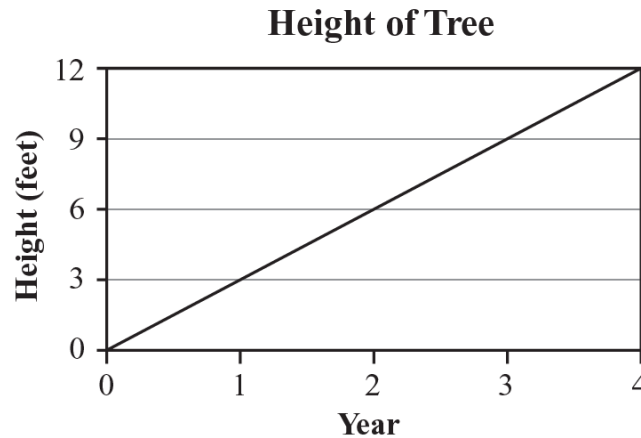
- (1) Evaluate:  $36^{-0.5} - \frac{1}{4} + 2 \div 3$ .
- A)  $\frac{7}{12}$       B)  $\frac{5}{6}$       C)  $\frac{23}{36}$       D)  $-5\frac{7}{12}$       E)  $1\frac{2}{3}$
- (2)  $1 - 2 + 3 - 4 + 5 - 6 + 7 - 8 + 9 - 10 =$
- A) 25      B) -5      C) 5      D) 30      E) None of these

- (3) Beth has  $\frac{3}{4}$  pound of blueberries to make smoothies. She made the first batch with  $\frac{1}{8}$  pound of the blueberries. How many pounds of blueberries were left?
- A)  $\frac{3}{32}$       B)  $\frac{5}{8}$       C)  $\frac{3}{4}$       D)  $\frac{7}{8}$       E)  $\frac{1}{2}$

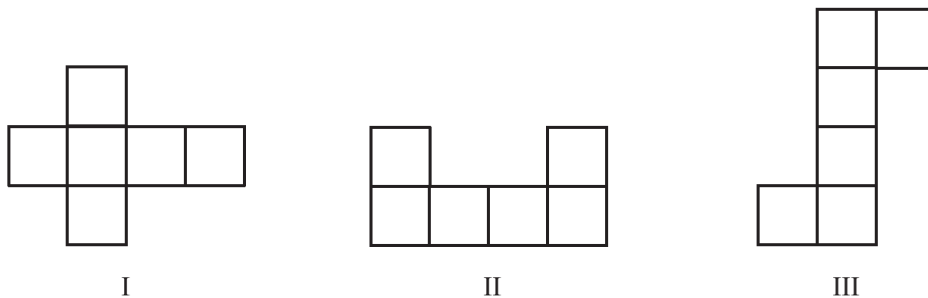
- (4) If the equation below is true, which of the following must also be true?

$$\mathbf{A - B = C}$$

- A)  $\mathbf{A - C = B}$       B)  $\mathbf{C + A = B}$       C)  $\mathbf{B - A = C}$       D)  $\mathbf{A + C = B}$       E)  $\mathbf{C - B = A}$
- (5) Genny planted a tree in her yard 4 years ago. She has recorded the height each year, which is shown in the line graph below. Based on the graph, how tall will the tree be in the 6th year?



- A) 13 feet      B) 15 feet      C) 16 feet      D) 18 feet      E) 20 feet
- (6) Which of these nets below, when folded, can produce a cube with no overlapping sides?



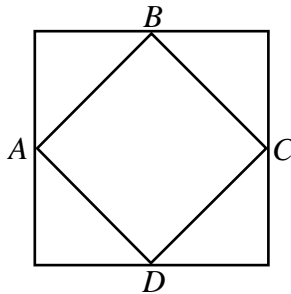
- A) I only      B) II only      C) I and III      D) II and III      E) All of them



- (7) Four tenths plus two hundredths plus six thousandths equals what decimal?  
 A) 0.012                  B) 0.066                  C) 0.12                  D) 0.24                  E) 0.426

- (8)  $\frac{3}{2} \times \frac{4}{3} \times \frac{5}{4} \times \frac{6}{5} \dots \times \frac{2022}{2021} = ?$   
 A) 1                  B) 1010                  C) 1011                  D) 2021                  E) 2022

- (9) Points  $A$ ,  $B$ ,  $C$  and  $D$  are midpoints of the sides of the larger square shown below. If the larger square has area 60, what is the area of the smaller square?

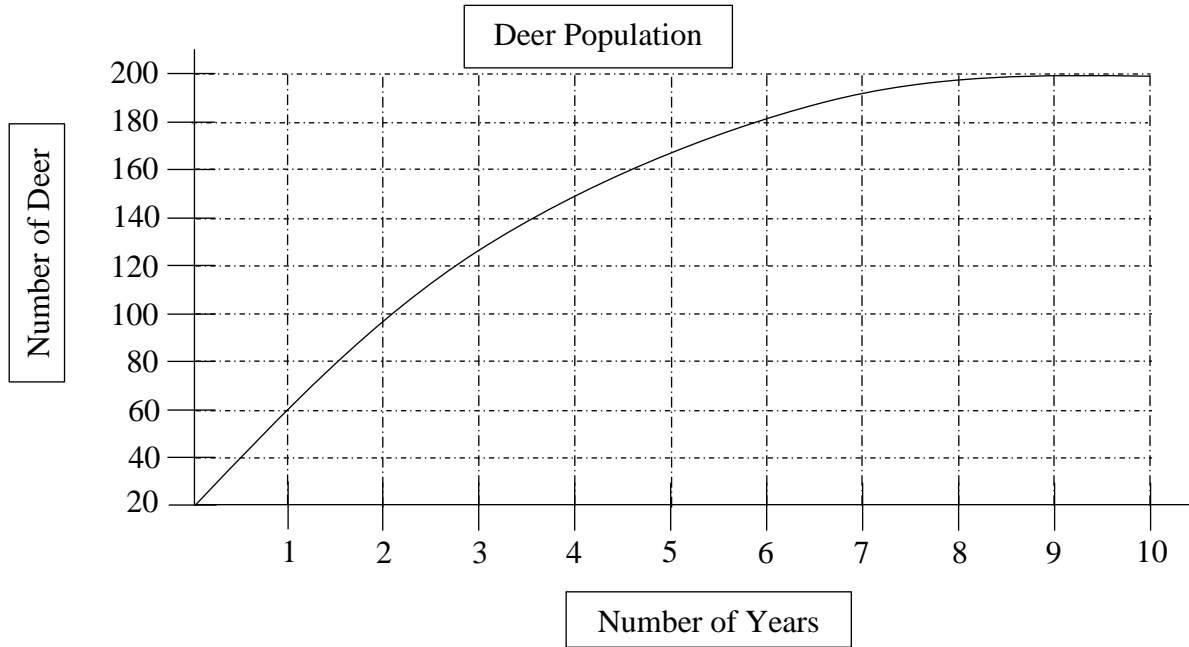


- A) 15                  B) 20                  C) 24                  D) 30                  E) 40
- (10)  $\frac{1}{10} + \frac{2}{10} + \frac{3}{10} + \dots + 1 = ?$   
 A)  $4\frac{3}{5}$                   B)  $5\frac{1}{2}$                   C)  $5\frac{3}{4}$                   D) 6                  E) 10
- (11)  $12^4 \div 5$  has a remainder of  
 A) 0                  B) 1                  C) 2                  D) 3                  E) 4
- (12) 29 % of what is equal to  $7\frac{1}{4} \times 16\%$ ?  
 A) 16                  B) 8                  C) 4                  D) 2                  E) 1
- (13) How many two-digit numbers less than 50 have digits whose sum is a perfect square?  
 A) 12                  B) 11                  C) 10                  D) 9                  E) 8
- (14) If two numbers differ by 4 and their sum is 14, what is the product of the two numbers?  
 A) 9                  B) 45                  C) 36                  D) 56                  E) 70
- (15) The mean of 13, 25, 30, and 36 is  
 A) 24                  B) 25                  C) 26                  D)  $26\frac{1}{4}$                   E) 27
- (16) What is the sum of the prime integers between 11 and 20?  
 A) 32                  B) 39                  C) 42                  D) 47                  E) 49
- (17) If  $x - y = 3$  and  $x + y = 12$ , then  $x^2 - y^2 =$   
 A) 15                  B) 9                  C) 81                  D) 36                  E) 72

- (18)  $98^2 - 4 =$   
 A) 9600                      B) 1960                      C) 9984                      D) 9216                      E) None of these
- (19) What is the slope of the straight line  $\frac{2}{3}x - 4y = 1$ ?  
 A)  $\frac{1}{4}$                       B)  $\frac{1}{3}$                       C)  $\frac{1}{6}$                       D)  $\frac{1}{2}$                       E)  $\frac{1}{12}$
- (20) 4 gallons + 12 pints = \_\_\_\_\_quarts.  
 A) 18                      B) 20                      C) 22                      D) 24                      E) 30
- (21) If one dozen peaches cost \$12.84, then 4 peaches would cost  
 A) \$3.76                      B) \$3.88                      C) \$4.18                      D) \$4.24                      E) None of these
- (22) 11101 (base 2) = \_\_\_\_\_(base 8).  
 A) 15                      B) 40                      C) 31                      D) 35                      E) 41
- (23) What is the largest number that will divide evenly (no remainder) into the three numbers: 24, 40 and 64?  
 A) 2                      B) 4                      C) 8                      D) 12                      E) 16
- (24) 267419 divided by 11 has a remainder of  
 A) 2                      B) 5                      C) 6                      D) 10                      E) None of these
- (25) When a fair six-sided die is tossed on a tabletop, the bottom face cannot be seen. What is the probability that the product of the numbers on the five faces that can be seen is divisible by 6?  
 A)  $\frac{1}{3}$                       B)  $\frac{1}{2}$                       C)  $\frac{2}{3}$                       D)  $\frac{5}{6}$                       E) 1
- (26) If 20% of a number is 12, what is 30% of the same number?  
 A) 15                      B) 18                      C) 20                      D) 24                      E) 30
- (27) What is the greatest common factor (GCF) of the two terms below?  
 **$3x^2y$  and  $12xy^2$**   
 A)  $3x^2y^2$                       B)  $3xy$                       C)  $12xy$                       D)  $12x^2y^2$                       E)  $12x^3y^3$
- (28) Find the smallest positive integral value for  $k$  such that  $374k$  is divisible by 6.  
 A) 0                      B) 1                      C) 2                      D) 3                      E) 4
- (29) What is the unit's digits for  $13^{77}$ ?  
 A) 3                      B) 7                      C) 9                      D) 5                      E) 1
- (30)  $MDII + CX =$  \_\_\_\_\_ Arabic Numeral.  
 A) 1,216                      B) 1,521                      C) 1,110                      D) 1,612                      E) 1,608
- (31) If  $2x + 9 = 7 + 4x$ , then  $4x - 1 =$   
 A) 3                      B) 5                      C) 2                      D) 4                      E) None of these
- (32)  $(2.6)^2 \div (1.3)^2 \times (2.5)^2 =$   
 A) 5                      B) 10                      C) 12.5                      D) 15                      E) 25

- (33)  $1.181818\dots =$  \_\_\_\_\_ (common fraction)
- A)  $\frac{13}{11}$                       B)  $\frac{2}{13}$                       C)  $\frac{2}{11}$                       D)  $\frac{6}{5}$                       E)  $\frac{5}{6}$

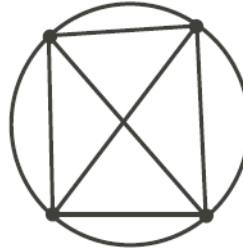
Twenty deer of both sexes were relocated to a high-fenced 100-acre property that contained enough forage to support 200 deer. Dan kept track of the number of deer and created a graph of the total deer population over a 10-year period. Answer questions 34 – 38 based on this graph.



- (34) During what year did the population of deer grow the least?  
 A) year 10                      B) year 1                      C) year 3                      D) year 9                      E) year 2
- (35) During the first year, by what percentage did the population of deer grow?  
 A) 40%                      B) 60%                      C) 200%                      D) 300%                      E) 600%
- (36) The deer population grew approximately by how many during the 5<sup>th</sup> year?  
 A) 10 deer                      B) 20 deer                      C) 30 deer                      D) 170 deer                      E) 180 deer
- (37) What is the slope of the graph during the first year?  
 A) 60                      B)  $\frac{1}{60}$                       C) 40                      D)  $\frac{1}{40}$                       E)  $\frac{1}{20}$
- (38) How many more deer were there at the end of the 9<sup>th</sup> year than there were at the end of the 1<sup>st</sup> year?  
 A) 200                      B) 180                      C) 160                      D) 140                      E) 120
- (39)  $345$  (base 6) –  $154$  (base 6) = \_\_\_\_\_ (base 6).  
 A) 151                      B) 251                      C) 161                      D) 261                      E) 211
- (40) What is the twelfth triangular number?  
 A) 144                      B) 78                      C) 12                      D) 156                      E) None of these

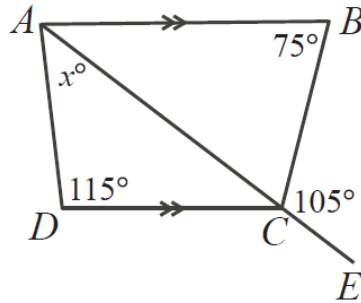
- (41)  $0.41666\dots - 0.1666\dots =$   
 A)  $\frac{1}{4}$                       B)  $\frac{2}{3}$                       C)  $\frac{1}{3}$                       D)  $\frac{1}{6}$                       E)  $\frac{7}{12}$

- (42) Distinct points are placed on a circle. Each pair of points is joined with a line segment. An example with 4 points and six line segments is shown below. If 8 distinct points are placed on a circle, how many line segments would there be?



- A) 21                      B) 27                      C) 28                      D) 36                      E) 56

- (43) In the diagram below,  $AB$  is parallel to  $DC$  and  $ACE$  is a straight line. What is the value of  $x$ ?



- A)  $30^\circ$                       B)  $35^\circ$                       C)  $40^\circ$                       D)  $45^\circ$                       E)  $50^\circ$

- (44) A bicycle travels at a constant speed of 15 km/h. A bus starts 195 km behind the bicycle and catches up to the bicycle in 3 hours. What is the average speed of the bus in km/h?

- A) 50 km/h                      B) 60 km/h                      C) 65 km/h                      D) 70 km/h                      E) 80 km/h

- (45) Mackenzie lists the numbers 3, 4, 5, 6, 7, 8, and 9. In her list, what is the ratio of the number of prime numbers to the number of composite numbers?

- A) 3 : 4                      B) 5 : 2                      C) 2 : 5                      D) 3 : 7                      E) 1 : 6

- (46) The mean (average) of a set of six numbers is 10. If the number 25 is removed from the set, what is the mean of the remaining numbers?

- A) 6                      B) 7                      C) 8                      D) 9                      E) 10

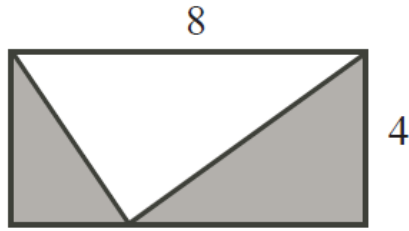
- (47) Two 5-digit positive integers are formed using each of the digits from 0 through 9 once. What is the smallest possible positive difference between the two integers?

- A) 229                      B) 247                      C) 249                      D) 269                      E) 469

- (48) If a pyramid has a square base, how many edges does the pyramid have?

- A) 3                      B) 5                      C) 6                      D) 8                      E) 12

- (49) The rectangle shown below has side lengths of 8 and 4. What is the area of the shaded part?



- A) 4                      B) 12                      C) 16                      D) 32                      E) 64
- (50) A pizza parlor prepared 39 pizzas to deliver. The first person delivered 7 pizzas and placed the rest of the pizza boxes on 4 shelves equally. Which equation could be used to find  $n$ , the total number of pizza boxes she put onto each shelf?
- A)  $n = (39 + 7) \div 3$   
B)  $n = 39 - 7 \div 4$   
C)  $n = 39 + (7 \times 4)$   
D)  $n = (39 - 7) \div 4$   
E)  $n = -39 - (7 \times 4)$

**2022 – 2023 University Interscholastic League JH/MS Mathematics Contest A – Key**

- (1) A
- (2) B
- (3) B
- (4) A
- (5) D
- (6) C
- (7) E
- (8) C
- (9) D
- (10) B
- (11) B
- (12) C
- (13) D
- (14) B
- (15) C
- (16) E
- (17) D
- (18) A
- (19) C
- (20) C
- (21) E (\$4.28)
- (22) D
- (23) C
- (24) E (9)
- (25) E

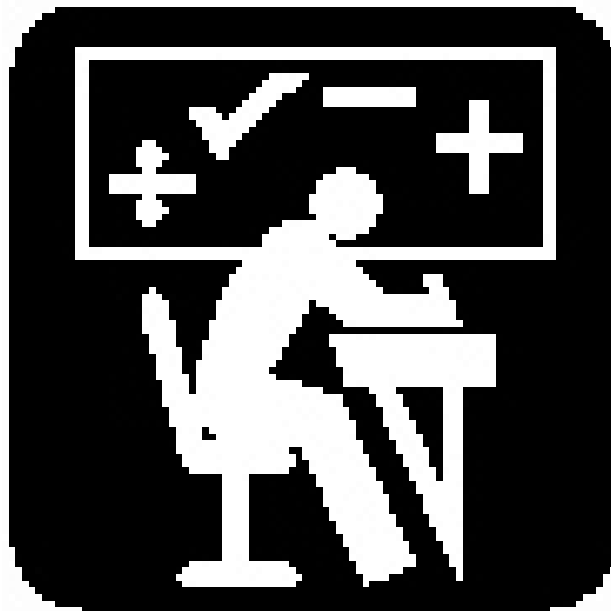
- (26) B
- (27) B
- (28) E
- (29) B
- (30) D
- (31) A
- (32) E
- (33) A
- (34) A
- (35) C
- (36) B
- (37) C
- (38) D
- (39) A
- (40) B
- (41) A
- (42) C
- (43) B
- (44) E
- (45) A
- (46) B
- (47) B
- (48) D
- (49) C
- (50) D

**FALL/WINTER DISTRICT 2022-2023**

**A+ ACADEMICS**



University Interscholastic League

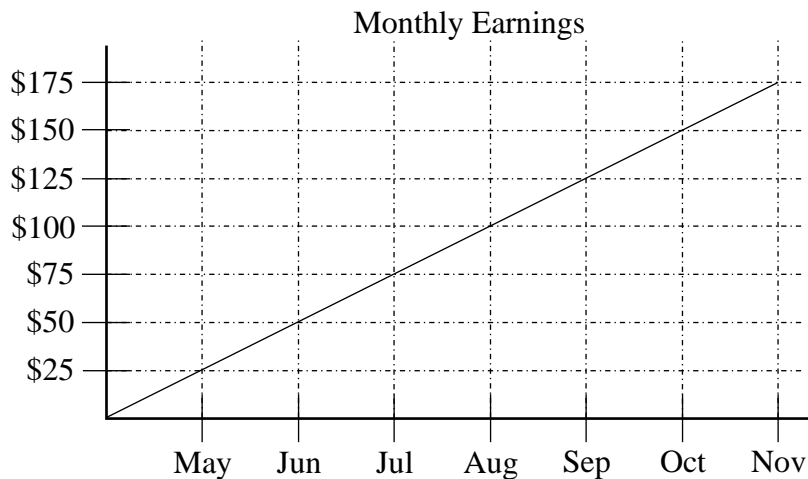


# Mathematics

**DO NOT OPEN TEST  
UNTIL TOLD TO DO SO**

## 2022 – 2023 University Interscholastic League JH/MS Mathematics Contest B

- (1) Evaluate:  $12 \times (0.5)^{-1} \div 4$ .  
A) 24                      B)  $1\frac{1}{2}$                       C)  $1\frac{1}{4}$                       D) -6                      E) 6
- (2)  $\frac{1}{2} \times \frac{2}{3} \times \frac{3}{4} \times \frac{4}{5} =$   
A)  $\frac{1}{10}$                       B) 1                      C)  $\frac{1}{5}$                       D)  $\frac{1}{4}$                       E) 5
- (3)  $0.25\% =$  \_\_\_\_\_ (common fraction)  
A)  $\frac{1}{250}$                       B)  $\frac{1}{25}$                       C)  $\frac{1}{4}$                       D)  $\frac{1}{400}$                       E)  $\frac{1}{40}$
- (4) Which of the statements below is an example of the associative property?  
A)  $X + Y = Y + X$   
B)  $2(X + Y) = 2X + 2Y$   
C)  $X^{-1} = \frac{1}{X}$   
D)  $X + (Y + Z) = (X + Y) + Z$   
E)  $X \times \frac{1}{X} = 1$
- (5) Each month Noah saved the money he earned for doing different jobs in his piggy bank every time he got paid. Based on the graph below, how much should he earn total for June, July, and August?



- A) \$50                      B) \$125                      C) \$225                      D) \$250                      E) \$275
- (6) What is 6050.287 rounded to the nearest ten?  
A) 6050                      B) 6100                      C) 650.29                      D) 650.3                      E) None of these
- (7) What is 40% of 250?  
A) 50                      B) 100                      C) 150                      D) 200                      E) 1,000
- (8)  $6\frac{1}{4} \times 16 =$   
A) 100                      B) 96                      C) 116                      D) 98                      E) 112

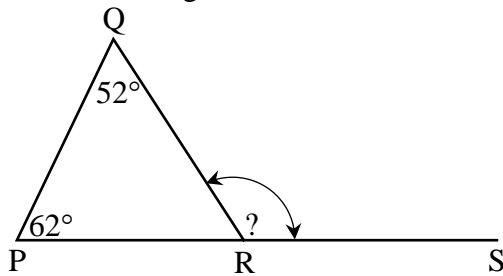


- (9) Javier buys 5 pounds of apples at 75¢ per pound and uses a 20% off coupon when he purchases the apples. What is the total amount he paid for the apples?  
 A) \$3.75                      B) \$7.50                      C) \$4.50                      D) \$2.75                      E) \$3.00
- (10)  $\frac{3}{2} \times \frac{4}{3} \times \frac{5}{4} \times \frac{6}{5} \dots \times \frac{2024}{2023} = ?$   
 A) 1,012                      B) 2,012                      C) 1,101                      D) 2,201                      E) 2,022
- (11) What value for  $w$  makes this equation true?  

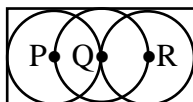
$$5 \times w = (5 \times 20) + (5 \times 3)$$
  
 A) 3                              B) 20                              C) 23                              D) 27                              E) 203
- (12)  $\frac{1}{10} + \frac{3}{10} + \frac{1}{2} + \frac{7}{10} \dots + \frac{13}{10} = ?$   
 A)  $3\frac{3}{5}$                               B)  $4\frac{9}{10}$                               C)  $4\frac{3}{5}$                               D)  $\frac{3}{5}$                               E)  $3\frac{9}{10}$
- (13)  $10^7 \div 7$  has a remainder of  
 A) 1                              B) 2                              C) 3                              D) 4                              E) 5
- (14)  $33\frac{1}{4}\%$  of 28 is equal to  $16\frac{5}{8}\%$  of what?  
 A) 56                              B) 36                              C) 14                              D) 2                              E) 1
- (15) What is the sum of the unique prime factors of 24?  
 A) 5                              B) 6                              C) 7                              D) 9                              E) 10
- (16) A whole number squared times itself is 216. What is the number?  
 A) 4                              B) 5                              C) 6                              D) 16                              E) 36
- (17) The median of 13, 25, 29, and 36 is  
 A)  $25\frac{3}{4}$                               B) 26                              C)  $26\frac{1}{4}$                               D)  $26\frac{3}{4}$                               E) 27
- (18) What is the largest prime number less than 40?  
 A) 23                              B) 29                              C) 31                              D) 37                              E) 39
- (19) If  $x = 21$ , then  $x^2 - 26x + 169 =$   
 A) 64                              B) 56                              C) 49                              D) 42                              E) 36
- (20)  $98^2 + 14^2 =$   
 A) 9,600                              B) 1,960                              C) 9,604                              D) 1,120                              E) None of these
- (21) 65 (base 10) = \_\_\_\_\_ (base 3).  
 A) 212                              B) 2012                              C) 2102                              D) 21 remainder 3                              E) 23
- (22) What is the smallest number that the three numbers: 12, 24 and 16, can divide evenly into?  
 A) 2                              B) 48                              C) 8                              D) 72                              E) 192

- (23) What is the slope of the straight line  $\frac{2}{3}x - 6y = 12$ ?
- A)  $\frac{1}{9}$                       B)  $\frac{1}{4}$                       C)  $-\frac{1}{4}$                       D)  $-\frac{1}{2}$                       E)  $\frac{1}{12}$
- (24) Paige has 5 classical CDs, 4 jazz CDs, and 11 rock CDs. If she randomly selects one CD from her collection to play, what is the probability that it is a classical CD?
- A) 0.20                      B) 0.44                      C) 0.55                      D) 0.80                      E) 0.25
- (25) In how many ways can you arrange 5 books on a shelf?
- A) 5                      B) 10                      C) 25                      D) 125                      E) None of these
- (26) What is the remainder when 3857596 is divided by 11?
- A) 2                      B) 5                      C) 6                      D) 8                      E) 9
- (27) Genny's candy jar contains 6 peppermint candies, 3 spearmint candies, and 3 wintergreen candies. The first candy she randomly picks from the jar is wintergreen. If it is not replaced, what is the probability the second candy she randomly picks from the jar will also be wintergreen?
- A)  $\frac{1}{12}$                       B)  $\frac{1}{6}$                       C)  $\frac{1}{3}$                       D)  $\frac{1}{11}$                       E)  $\frac{2}{11}$

- (28) Based on the angles given in the drawing below, what is the measure of  $\angle QRS$ ?



- A)  $118^\circ$                       B)  $114^\circ$                       C)  $112^\circ$                       D)  $66^\circ$                       E)  $57^\circ$
- (29) What is the least common Multiple (LCM) for the two terms below?
- $8x^2y$  and  $12x^3y^2$**
- A)  $2x^2y^2$                       B)  $2xy$                       C)  $12xy$                       D)  $2x^3y^2$                       E)  $24x^3y^2$
- (30) Find the smallest positive integral value for  $k$  such that  $574k2$  is divisible by 4.
- A) 9                      B) 7                      C) 5                      D) 3                      E) 1
- (31) What is the unit's digit for  $15^6$ ?
- A) 1                      B) 7                      C) 9                      D) 5                      E) 0
- (32) Three congruent circles with centers P, Q and R are tangent to the sides of rectangle as shown below. The circle centered at Q has diameter 4 and passes through points P and R. What is the area of the rectangle?

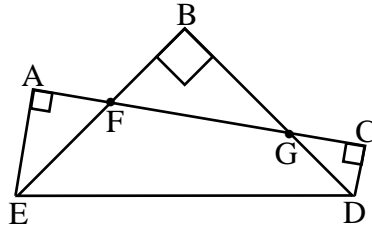


- A) 16                      B) 24                      C) 32                      D) 64                      E) 128

- (33) If  $2x + y = 6$  and  $3x - y = 14$ , then  $xy =$   
 A) -8                      B) -6                      C) 8                      D) 6                      E) None of these

- (34)  $(9.0)^2 \div (1.8)^2 \times (1.2)^2 =$   
 A) 2.4                      B) 36                      C) 6                      D) 24                      E) 300

- (35) In the figure below  $\angle A$ ,  $\angle B$ , and  $\angle C$  are each right angles. If  $\angle AEB$  is  $40^\circ$  and  $\angle BED = \angle BDE$ , then what does  $\angle CDE$  equal?



- A)  $75^\circ$                       B)  $80^\circ$                       C)  $85^\circ$                       D)  $90^\circ$                       E)  $95^\circ$

- (36)  $1.41666\dots =$  \_\_\_\_\_ (common fraction)  
 A)  $\frac{7}{12}$                       B)  $\frac{5}{12}$                       C)  $\frac{17}{12}$                       D)  $\frac{16}{9}$                       E)  $\frac{17}{9}$

- (37)  $33$  (base 4) +  $44$  (base 5) +  $55$  (base 6) = \_\_\_\_\_ (base 10).  
 A) 132                      B) 131                      C) 39                      D) 74                      E) 75

- (38) What is the sum of the seventh and eighth triangular numbers?  
 A) 15                      B) 225                      C) 56                      D) 64                      E) None of these

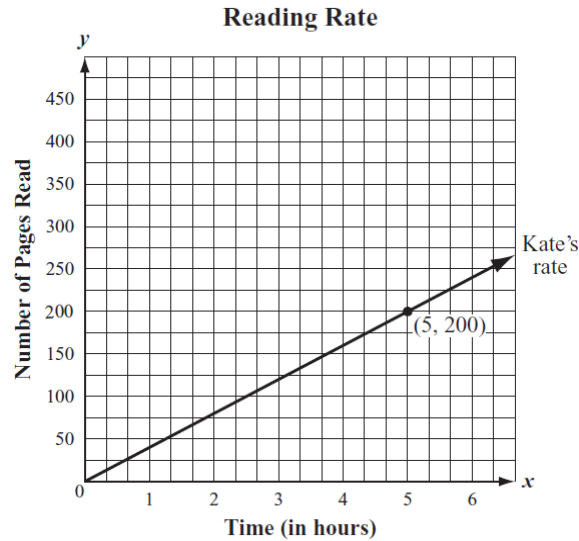
- (39) What is the 100<sup>th</sup> digit to the right of the decimal point in the decimal form of  $\frac{4}{37}$ ?  
 A) 0                      B) 1                      C) 3                      D) 8                      E) 9

- (40) Students from three middle schools worked on a summer project.  
 Seven students from Obama Middle School worked for 3 days.  
 Four students from Lincoln Middle School worked for 5 days.  
 Five students from Richards Middle School worked for 9 days.  
 The total amount paid for the students' work was \$774. Assuming each student received the same amount for a day's work, how much did the students from Lincoln Middle School earn altogether?  
 A) \$9.00                      B) \$48.38                      C) \$180.00                      D) \$193.50                      E) \$258.00

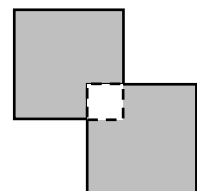
- (41) Suppose a new operation,  $\heartsuit$ , is defined so that  $a \heartsuit b = a + b^2$ . What is  $(2 \heartsuit 3) \heartsuit 4$  equal?  
 A) 27                      B) 9                      C) 21                      D) 41                      E) 29

- (42) Which of the following statements is false?  
 A) Every number that is odd has a factor of 3.  
 B) Every prime number has exactly two factors.  
 C) Every perfect square has an odd number of factors.  
 D) Every number that has 8 as a factor also has 4 as a factor.  
 E) Every composite number can be written as the product of prime numbers.

Kate is reading a 500-page book. The graph below represents the relationship between the number of hours Kate has spent reading and the number of pages she has read. Please use this information plus the graph to answer questions 43 – 46.



- (43) At what rate, in pages per hour (Pgs/hr), is Kate reading?  
 A)  $\frac{1}{4}$  Pg/hr      B) 50 Pgs/hr      C) 4 Pgs/hr      D) 40 Pgs/hr      E) 75 Pgs/hr
- (44) What is the total amount of time, in hours, it will take Kate to read the entire 500-page book?  
 A) 11 hrs. 20 min.    B) 12 hrs.      C) 12 hrs. 30 min.    D) 12 hrs. 45 min.    E) 14 hrs.
- (45) At her reading rate, how long does it take Kate to read a single page?  
 A) 40 seconds      B) 30 seconds      C) 20 seconds      D) 15 seconds      E) 10 seconds
- (46) Maryanne decides to read the same book later. If she can read at a rate that is 25% greater than Kate, how long should it take her to finish reading the book?  
 A) 10 hours      B) 11 hours      C) 11 hrs. 15 min.    D) 12 hours      E) 12 hrs. 25 min.
- (47) Four ping pong balls numbered 1, 2, 3, and 4 are placed in a bag and two are drawn at random without replacement. What is the probability that their sum is an odd number?  
 A)  $\frac{1}{3}$       B)  $\frac{1}{2}$       C)  $\frac{2}{3}$       D)  $\frac{7}{10}$       E)  $\frac{4}{5}$
- (48) If  $x - y = 18$  and  $x^2 - y^2 = 396$ , then  $xy =$   
 A) 2      B) 20      C) 21      D) 22      E) 40
- (49) A box contains 14 disks, each colored red, blue or green. There are twice as many red disks as green disks, and half as many blue as green. How many disks are green?  
 A) 2      B) 4      C) 6      D) 8      E) 10
- (50) Two identical squares, each with side length 5-cm, overlap as shown to the right. The shape of their overlap is a square, which has an area of  $4\text{-cm}^2$ . What is the perimeter, in centimeters, of the shaded figure?  
 A) 24 cm      B) 32 cm      C) 40 cm      D) 42 cm      E) 50 cm



**2022 – 2023 University Interscholastic League JH/MS Mathematics Contest B – Key**

- (1) E
- (2) C
- (3) D
- (4) D
- (5) C
- (6) A
- (7) B
- (8) A
- (9) E
- (10) A
- (11) C
- (12) B
- (13) C
- (14) A
- (15) A
- (16) C
- (17) E
- (18) D
- (19) A
- (20) E (9800)
- (21) C
- (22) B
- (23) A
- (24) E
- (25) E (120)

- (26) C
- (27) E
- (28) B
- (29) E
- (30) E
- (31) D
- (32) C
- (33) A
- (34) B
- (35) E
- (36) C
- (37) D
- (38) D
- (39) B
- (40) C
- (41) A
- (42) A
- (43) D
- (44) C
- (45) A
- (46) A
- (47) C
- (48) E
- (49) B
- (50) B

**SPRING DISTRICT 2022-2023**

**A+ ACADEMICS**



University Interscholastic League

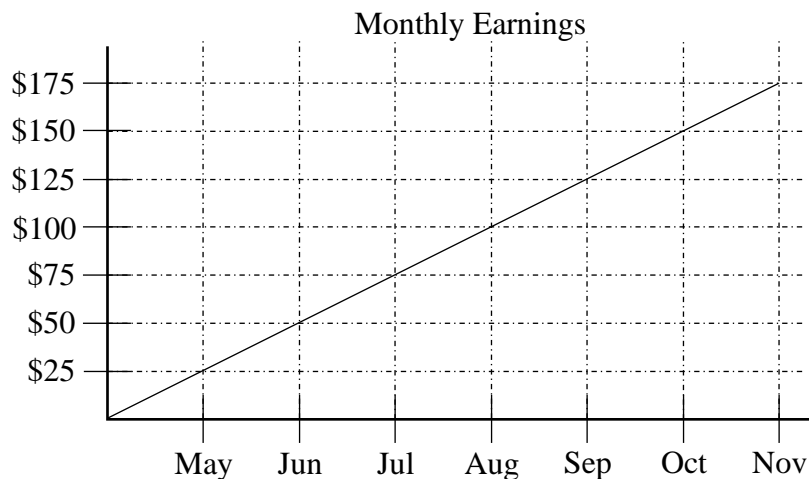


# Mathematics

**DO NOT OPEN TEST  
UNTIL TOLD TO DO SO**

## 2022 – 2023 University Interscholastic League JH/MS Mathematics Contest C

- (1) Evaluate:  $12^{-1} \times (0.5)^{-1} \times 60$ .  
 A) 24                      B)  $1\frac{1}{2}$                       C) 5                      D)  $2\frac{1}{2}$                       E) None of these
- (2)  $\frac{2}{3} \times \frac{3}{4} \times \frac{4}{5} \times \frac{5}{6} =$   
 A)  $\frac{1}{6}$                       B)  $\frac{1}{3}$                       C)  $\frac{2}{5}$                       D)  $\frac{1}{4}$                       E) 1
- (3)  $4.4\% =$  \_\_\_\_\_ (common fraction)  
 A)  $\frac{11}{250}$                       B)  $\frac{44}{25}$                       C)  $\frac{1}{44}$                       D)  $\frac{1}{440}$                       E)  $\frac{1}{40}$
- (4) Which of the statements below is an example of the distributive property?  
 A)  $X + Y = Y + X$   
 B)  $2(X + Y) = 2X + 2Y$   
 C)  $X^{-1} = \frac{1}{X}$   
 D)  $X + (Y + Z) = (X + Y) + Z$   
 E)  $X \times \frac{1}{X} = 1$
- (5) Each month Wesley saved the money he earned for doing different jobs in his piggy bank every time he got paid. Based on the graph below, how much should he earn total for May, June, and July?



- A) \$150                      B) \$125                      C) \$225                      D) \$250                      E) \$275
- (6) What is 6050.287 rounded to the nearest tenth?  
 A) 6,050                      B) 6,100                      C) 6,050.29                      D) 6,050.3                      E) 6,051
- (7) What is 80% of 250?  
 A) 50                      B) 100                      C) 150                      D) 200                      E) 1,000
- (8)  $6\frac{1}{4} \times 40 =$   
 A) 240                      B) 10                      C) 280                      D) 28                      E) 250

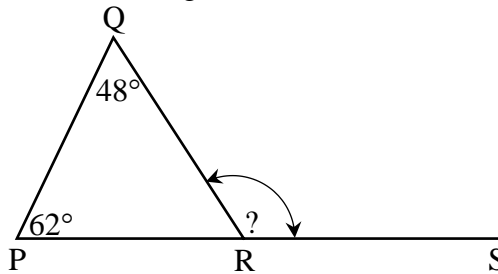
- (9) Javier buys 5 pounds of apples at 60¢ per pound and uses a 20% off coupon when he purchases the apples. What is the total amount he paid for the apples?  
 A) \$3.00                      B) \$3.60                      C) \$2.60                      D) \$2.40                      E) \$4.00
- (10)  $\frac{3}{2} \times \frac{4}{3} \times \frac{5}{4} \times \frac{6}{5} \dots \times \frac{1980}{1979} = ?$   
 A) 3,960                      B) 989.5                      C) 495                      D) 1,981                      E) 990
- (11) What value for  $w$  makes this equation true?  

$$\mathbf{8 \times w = (8 \times 20) - (8 \times 4)}$$
  
 A) 24                      B) 16                      C) 22                      D) 20                      E) 128
- (12)  $\frac{2}{10} + \frac{4}{10} + \frac{6}{10} + \frac{8}{10} + \dots + \frac{14}{10} = ?$   
 A)  $4\frac{3}{5}$                       B)  $4\frac{2}{5}$                       C)  $3\frac{3}{5}$                       D)  $5\frac{3}{5}$                       E)  $3\frac{9}{10}$
- (13)  $4^{10} \div 11$  has a remainder of  
 A) 1                      B) 2                      C) 3                      D) 4                      E) 5
- (14)  $18\frac{2}{3}\%$  of 15 is equal to 56% of what?  
 A) 75                      B) 60                      C) 45                      D) 25                      E) 5
- (15) What is the sum of the unique prime factors of 70?  
 A) 7                      B) 14                      C) 12                      D) 21                      E) 15
- (16) A whole number squared times itself is 343. What is the number?  
 A) 3                      B) 5                      C) 6                      D) 7                      E) 49
- (17) What is the median of 12, 24, 36, and 28?  
 A) 25                      B) 26                      C)  $25\frac{1}{4}$                       D)  $25\frac{3}{4}$                       E) 27
- (18) What is the smallest prime number greater than 70?  
 A) 73                      B) 77                      C) 78                      D) 79                      E) None of these
- (19) If  $x = 17$ , then  $x^2 + 26x + 169 =$   
 A) 30                      B) 90                      C) 900                      D) 1,032                      E) 1,690
- (20)  $13^2 + 26^2 =$   
 A) 845                      B) 676                      C) 689                      D) 1,352                      E) 1,521
- (21) 59 (base 10) = \_\_\_\_\_ (base 3).  
 A) 192                      B) 2012                      C) 212                      D) 19 remainder 2                      E) 2102
- (22) What is the smallest number that the three numbers: 18, 12 and 24, can divide evenly into?  
 A) 2                      B) 4                      C) 6                      D) 48                      E) 72

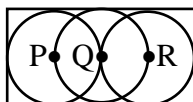


- (23) What is the slope of the straight line  $\frac{3}{4}x - 6y = 12$ ?  
 A) -8                      B)  $\frac{3}{4}$                       C)  $-\frac{1}{8}$                       D)  $\frac{1}{8}$                       E)  $\frac{-3}{4}$
- (24) Paige has 8 classical CDs, 7 jazz CDs, and 5 rock CDs. If she randomly selects one CD from her collection to play, what is the probability that it is a rock CD?  
 A) 0.05                      B) 0.50                      C) 0.25                      D) 0.20                      E) 0.16
- (25) In how many ways can you arrange 6 books on a shelf?  
 A) 720                      B) 360                      C) 250                      D) 36                      E) 30
- (26) What is the remainder when 1234567 is divided by 11?  
 A) 1                      B) 2                      C) 3                      D) 4                      E) 6
- (27) Genny's candy jar contains 6 peppermint candies, 3 spearmint candies, and 3 wintergreen candies. The first candy she randomly picks from the jar is peppermint. If it is not replaced, what is the probability the second candy she randomly picks from the jar will also be peppermint?  
 A)  $\frac{1}{3}$                       B)  $\frac{5}{11}$                       C)  $\frac{1}{2}$                       D)  $\frac{5}{12}$                       E)  $\frac{1}{6}$

- (28) Based on the angles given in the drawing below, what is the measure of  $\angle QRS$ ?



- A)  $110^\circ$                       B)  $128^\circ$                       C)  $112^\circ$                       D)  $62^\circ$                       E)  $42^\circ$
- (29) What is the least common Multiple (LCM) for the two terms below?  
 **$16x^2y^3$  and  $12x^3y^2$**   
 A)  $2x^2y^2$                       B)  $4xy$                       C)  $4x^2y^2$                       D)  $48x^3y^3$                       E)  $24x^3y^3$
- (30) Find the smallest positive integral value for  $k$  such that  $772k5$  is divisible by 3.  
 A) 0                      B) 1                      C) 3                      D) 6                      E) 9
- (31) What is the unit's digit for  $12^8$ ?  
 A) 1                      B) 2                      C) 4                      D) 5                      E) 6
- (32) Three congruent circles with centers P, Q and R are tangent to the sides of rectangle as shown below. The circle centered at Q has diameter 6 and passes through points P and R. What is the area of the rectangle?

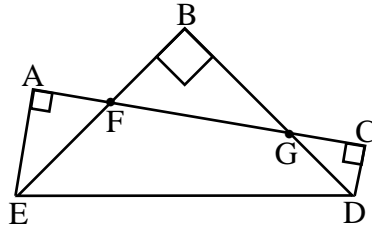


- A) 12                      B) 24                      C) 36                      D) 64                      E) 72

- (33) If  $2x + y = 11$  and  $3x - y = 14$ , then  $xy =$   
 A) -5                      B) -6                      C) 5                      D) 6                      E) None of these

- (34)  $(1.5)^2 \div (4.5)^2 \times (1.8)^2 =$   
 A) 2.4                      B) 3.6                      C) 0.02                      D) 0.36                      E) 0.04

- (35) In the figure below  $\angle A$ ,  $\angle B$ , and  $\angle C$  are each right angles. If  $\angle AEB$  is  $35^\circ$  and  $\angle BED = \angle BDE$ , then what is  $\angle CDE$  equal?



- A)  $75^\circ$                       B)  $100^\circ$                       C)  $30^\circ$                       D)  $80^\circ$                       E)  $120^\circ$

- (36)  $1.1333 \dots =$  \_\_\_\_\_ (common fraction)  
 A)  $\frac{2}{15}$                       B)  $\frac{17}{15}$                       C)  $\frac{7}{15}$                       D)  $\frac{13}{9}$                       E)  $\frac{13}{15}$

- (37)  $44$  (base 5) +  $55$  (base 6) +  $66$  (base 7) = \_\_\_\_\_ (base 10).  
 A) 107                      B) 165                      C) 156                      D) 83                      E) 104

- (38) What is the sum of the ninth and tenth triangular numbers?  
 A) 100                      B) 90                      C) 81                      D) 19                      E) None of these

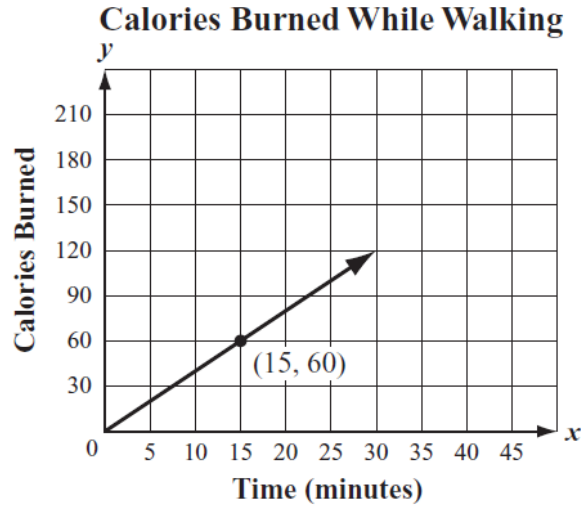
- (39) What is the 100<sup>th</sup> digit to the right of the decimal point in the decimal form of  $\frac{11}{37}$ ?  
 A) 0                      B) 1                      C) 2                      D) 7                      E) 9

- (40) Students from three middle schools worked on a summer project.  
 Seven students from Obama Middle School worked for 3 days.  
 Four students from Lincoln Middle School worked for 5 days.  
 Five students from Richards Middle School worked for 9 days.  
 The total amount paid for the students' work was \$774. Assuming each student received the same amount for a day's work, how much did the students from Richards Middle School earn altogether?  
 A) \$45.00                      B) \$405.00                      C) \$180.00                      D) \$81.00                      E) \$181.00

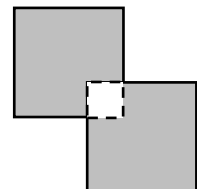
- (41) Suppose a new operation,  $\heartsuit$ , is defined so that  $a \heartsuit b = a^2 - b^2$ . What is  $(2 \heartsuit 3) \heartsuit 4$  equal?  
 A) -9                      B) 9                      C) 4                      D) 25                      E) 32

- (42) Which of the following statements is false?  
 A) Every number that is odd has a factor of 1.  
 B) Every prime number has exactly two factors.  
 C) Every perfect square has an even number of factors.  
 D) Every number that has 8 as a factor also has 4 as a factor.  
 E) Every composite number can be written as the product of prime numbers.

The graph below shows the number of Calories Matthew will burn over time while walking at a constant rate. Please use this information plus the graph to answer questions 43 – 46.



- (43) At what rate, in calories per minute (Cal/min), is Matthew burning?  
 A)  $\frac{1}{4}$  Cal/min      B) 75 Cal/min      C) 4 Cal/min      D) 40 Cal/min      E) 0.4 Cal/min
- (44) What is the number of Calories Matthew will burn after walking at a constant rate for 42 minutes?  
 A) 168 Calories      B) 210 Calories      C) 132 Calories      D) 162 Calories      E) 630 Calories
- (45) At his Calorie burning rate, how long does it take Matthew to burn a single Calorie?  
 A) 2.5 seconds      B) 4 seconds      C) 6.6 seconds      D) 15 seconds      E) 25 seconds
- (46) Mike, Matthew’s older brother, decides to exercise by walking as well. If he can walk at a rate that burns 25% more Calories per minute than Matthew, how long should it take him to burn 100 Calories?  
 A) 4 minutes      B) 5 minutes      C) 6 minutes      D) 20 minutes      E) 25 minutes
- (47) Four ping pong balls numbered 1, 2, 3, and 4 are placed in a bag and two are drawn at random without replacement. What is the probability that their sum is an even number?  
 A)  $\frac{7}{10}$       B)  $\frac{1}{2}$       C)  $\frac{2}{3}$       D)  $\frac{1}{3}$       E)  $\frac{4}{5}$
- (48) If  $x - y = 18$  and  $x^2 - y^2 = 216$ , then  $xy =$   
 A) 15      B) 45      C) 30      D) -30      E) -45
- (49) A box contains 21 disks, each colored red, blue or green. There are twice as many red disks as green disks, and half as many blue as green. How many disks are green?  
 A) 2      B) 4      C) 6      D) 8      E) 10
- (50) Two identical squares, each with side length 8-cm, overlap as shown to the right. The shape of their overlap is a square, which has an area of  $9\text{-cm}^2$ . What is the perimeter, in centimeters, of the shaded figure?  
 A) 20 cm      D) 52 cm  
 B) 32 cm      E) 55 cm  
 C) 42 cm



**2022 – 2023 University Interscholastic League JH/MS Mathematics Contest C – Key**

- (1) E (10)
- (2) B
- (3) A
- (4) B
- (5) A
- (6) D
- (7) D
- (8) E
- (9) D
- (10) E
- (11) B
- (12) D
- (13) A
- (14) E
- (15) B
- (16) D
- (17) B
- (18) E (71)
- (19) C
- (20) A
- (21) B
- (22) E
- (23) D
- (24) C
- (25) A

- (26) D
- (27) B
- (28) A
- (29) D
- (30) A
- (31) E
- (32) E
- (33) C
- (34) D
- (35) B
- (36) B
- (37) A
- (38) A
- (39) C
- (40) B
- (41) B
- (42) C
- (43) C
- (44) A
- (45) D
- (46) D
- (47) D
- (48) E
- (49) C
- (50) D

**University Interscholastic League  
2022 – 2023 Elementary Number Sense Test**

A

Contestant's Number \_\_\_\_\_

Final		
2 <sup>nd</sup>		
1 <sup>st</sup>		
<b>Score</b>	<b>Initials</b>	

**Read Directions Carefully  
Before Beginning Test**

**Do Not Unfold This Sheet  
Until Told to Begin**

Directions: Do not turn this page until the person conducting this test gives the signal to begin. This is a ten-minute test. There are 80 problems. Solve accurately and quickly as many as you can in the order in which they appear. **ALL PROBLEMS ARE TO BE SOLVED MENTALLY.** Make no calculations with paper and pencil. Write only the answer in the space provided at the end of each problem. Problems marked with a (\*) require approximate integral answers; any answer to a starred problem that is within five percent of the exact answer will be scored correct; all other problems require exact answers.

The person conducting this contest should explain these directions to the contestants.  
**Stop – Wait for Signal!**

- |  |   |
|--|---|
| <p>(1) <math>34 - 23 =</math> _____</p> <p>(2) <math>8 \times 9 =</math> _____</p> <p>(3) <math>223 + 222 =</math> _____</p> <p>(4) <math>2022 \div 2 =</math> _____</p> <p>(5) <math>3 \times 5 \times 4 =</math> _____</p> <p>(6) <math>132 \div 11 =</math> _____</p> <p>(7) <math>11 + 12 + 13 =</math> _____</p> <p>(8) <math>458 - 205 =</math> _____</p> <p>(9) <math>32 \times 5 =</math> _____</p> <p>* (10) <math>2296 + 1892 =</math> _____</p> <p>(11) <math>11 \times 34 =</math> _____</p> <p>(12) Which digit is in the thousandths place in 94371.65028? _____</p> <p>(13) <math>32 \times 12 =</math> _____</p> <p>(14) 70836.4728 rounded to the thousandths place is _____ (decimal)</p> <p>(15) What is the remainder for <math>71532 \div 4</math>? _____</p> <p>(16) The number of odd whole numbers between 9 and 25 is _____</p> <p>(17) <math>8 \times 10^3 + 4 \times 10^1 + 4 \times 10^{-1} =</math> _____ (decimal)</p> <p>(18) <math>18 \times 6 + 18 \times 4 =</math> _____</p> <p>(19) MMDCL = _____ (Arabic Numeral)</p> | <p>* (20) <math>149 \times 319 =</math> _____</p> <p>(21) <math>12 - 4 \div 2 =</math> _____</p> <p>(22) <math>9 + 12 + 15 + 18 + 21 =</math> _____</p> <p>(23) 2 days = _____ hours</p> <p>(24) <math>\frac{3}{4} =</math> _____ percent</p> <p>(25) <math>\frac{5}{18} - \frac{1}{18} =</math> _____</p> <p>(26) <math>88 \times 91 =</math> _____</p> <p>(27) 0.55 = _____ common fraction</p> <p>(28) If 18 ♥ costs 43¢ then 36 ♥ cost _____ ¢</p> <p>(29) <math>\frac{5}{12} \times 36 =</math> _____</p> <p>* (30) <math>111 \times 359 =</math> _____</p> <p>(31) 30 nickels = _____ quarters</p> <p>(32) The product of the two largest primes less than 20 is _____</p> <p>(33) 3 cups = _____ ounces</p> <p>(34) <math>1225 \div 25 =</math> _____</p> <p>(35) <math>44\frac{4}{9}\% =</math> _____ common fraction</p> <p>(36) The LCM of 12 and 18 is _____</p> <p>(37) <math>103 \times 104 =</math> _____</p> |
|--|---|

- (38)  $2\frac{4}{9} \times 7\frac{4}{9} =$  \_\_\_\_\_ (mixed number)
- (39) The ratio in inches of 2 yards to 1 foot is \_\_\_\_\_
- \*(40)  $167 \times 603 =$  \_\_\_\_\_
- (41)  $17^2 =$  \_\_\_\_\_
- (42)  $5^3 =$  \_\_\_\_\_
- (43) The side for a cube with volume  $64 \text{ cm}^3$  is \_\_\_\_\_ cm
- (44) The perimeter of a square with area  $361 \text{ m}^2$  is \_\_\_\_\_ m
- (45)  $5\frac{3}{5} \div \frac{1}{5} =$  \_\_\_\_\_
- (46)  $\sqrt{576} =$  \_\_\_\_\_
- (47) What is the perimeter of a right triangle with legs 3 and 4? \_\_\_\_\_
- (48)  $22 \times 13 =$  \_\_\_\_\_
- (49) If  $x = 15$ , then  $21 + 3x =$  \_\_\_\_\_
- \*(50)  $13 + 2023 + 2975 =$  \_\_\_\_\_
- (51) What is the number,  $k$ , in the sequence: 1, 4, 9, 25,  $k$ , 49, 64, ...? \_\_\_\_\_
- (52)  $12\frac{4}{9} - 7\frac{7}{9} =$  \_\_\_\_\_ (mixed number)
- (53) If the circumference of a circle is  $144\pi$ , what is the radius of the circle? \_\_\_\_\_
- (54) What is the volume of a rectangular box that measures 5" by 6" by 8"? \_\_\_\_\_  $\text{in}^3$
- (55) 23 (base 4) = \_\_\_\_\_ (base 10)
- (56) What whole number cubed plus eight equals thirty-five? \_\_\_\_\_
- (57) A triangle has sides of 10, 12, and semiperimeter of 18. What is the third side? \_\_\_\_\_
- (58) If set  $A = \{2, 4, 6, \dots, 10\}$  and set  $B = \{1, 2, 3, 4, 5\}$ , then the number of elements in  $A \cup B$  is \_\_\_\_\_
- (59) What is the perimeter of the square with a side length of  $8\frac{3}{4}$ ? \_\_\_\_\_
- \*(60) 361 days = \_\_\_\_\_ hours
- (61) 57 (base 8) = \_\_\_\_\_ (base 2)
- (62)  $-2^4 \times (-16) =$  \_\_\_\_\_
- (63) Two fair dice are thrown. What is the probability that the sum of the two sides showing is 9? \_\_\_\_\_
- (64) 1 square mile = \_\_\_\_\_ acres
- (65)  $43^2 =$  \_\_\_\_\_
- (66)  $4^6 \div 7$  has remainder of \_\_\_\_\_
- (67) How many edges does a square pyramid have? \_\_\_\_\_
- (68) If  $2x + 12 < 8$ , then  $x <$  \_\_\_\_\_
- (69)  $\frac{6}{7} + \frac{7}{6} = 2 +$  \_\_\_\_\_
- \*(70)  $102 \times \sqrt{784} =$  \_\_\_\_\_
- (71) The multiplicative inverse of  $-3\frac{1}{2}$  is \_\_\_\_\_
- (72) The area of a square with diagonal 12 is \_\_\_\_\_
- (73) If  $13\frac{1}{2}\%$  of  $x$  is  $4\frac{1}{2}\%$  of 6, then  $x =$  \_\_\_\_\_
- (74)  $(-24) \div (-6) \times (-2) =$  \_\_\_\_\_
- (75)  $24^2 + 12^2 =$  \_\_\_\_\_
- (76)  $\left(25\frac{1}{2}\right)^2 - \left(14\frac{1}{2}\right)^2 =$  \_\_\_\_\_
- (77) What is the area of a trapezoid with bases 12, 16 and height 10? \_\_\_\_\_
- (78)  $286 \times 28 =$  \_\_\_\_\_
- (79)  $19^2 + 19 =$  \_\_\_\_\_
- \*(80)  $39 \times 40 \times 42 =$  \_\_\_\_\_

## 2022 – 2023 University Interscholastic League Elementary Number Sense Test A – Key

(1) 11	*(20) 45155 – 49907	(38) $18\frac{16}{81}$	(59) 35
(2) 72	(21) 10	(39) 6	*(60) 8231 – 9097
(3) 445	(22) 75	*(40) 95666 – 105736	(61) 101111
(4) 1011	(23) 48	(41) 289	(62) 256
(5) 60	(24) 75	(42) 125	(63) $\frac{1}{9}$
(6) 12	(25) $\frac{2}{9}$	(43) 4	(64) 640
(7) 36	(26) 8008	(44) 76	(65) 1849
(8) 253	(27) $\frac{11}{20}$	(45) 28	(66) 1
(9) 160	(28) 86	(46) 24	(67) 8
*(10) 3979 – 4397	(29) 15	(47) 12	(68) -2
(11) 374	*(30) 37857 – 41841	(48) 286	(69) $\frac{1}{42}$
(12) 0	(31) $5\frac{3}{5}; \frac{18}{5}; 5.6$	(49) 66	*(70) 2714 – 2998
(13) 384	(32) 323	*(50) 4761 – 5261	(71) $-\frac{2}{7}$
(14) 70836.473	(33) 24	(51) 36	(72) 72
(15) 0	(34) 49	(52) $4\frac{2}{3}$	(73) 2
(16) 7	(35) $\frac{4}{9}$	(53) 72	(74) -8
(17) 8040.4	(36) 36	(54) 240	(75) 720
(18) 180	(37) 10712	(55) 11	(76) 440
(19) 2650		(56) 3	(77) 140
		(57) 14	(78) 8008
		(58) 8	(79) 380
			*(80) 62244 – 68796

Note: \*(Number) x – y means an integer between x and y inclusive.

If an answer is of the type like  $\frac{2}{3}$  it cannot be written as .666... or  $\overline{.6}$ .

**University Interscholastic League  
2022 – 2023 Elementary Number Sense Test**

**B**

Contestant's Number \_\_\_\_\_

Final		
2 <sup>nd</sup>		
1 <sup>st</sup>		
	<b>Score</b>	<b>Initials</b>

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**Stop – Wait for Signal!**

- |  |  |
|--|--|
| <p>(1) <math>6 \times 3 =</math> _____</p> <p>(2) <math>314 + 413 =</math> _____</p> <p>(3) <math>57 - 36 =</math> _____</p> <p>(4) <math>3204 \div 4 =</math> _____</p> <p>(5) <math>187 \div 11 =</math> _____</p> <p>(6) <math>15 + 17 + 16 =</math> _____</p> <p>(7) <math>8 \times 6 \times 2 =</math> _____</p> <p>(8) <math>735 - 532 =</math> _____</p> <p>(9) <math>71 \times 6 =</math> _____</p> <p>*(10) <math>2301 + 1981 =</math> _____</p> <p>(11) <math>11 \times 57 =</math> _____</p> <p>(12) Which digit is in the hundreds place in 34976.15802? _____</p> <p>(13) <math>12 \times 16 =</math> _____</p> <p>(14) 78630.4728 rounded to the ten-thousands place is _____</p> <p>(15) What is the remainder for <math>71513 \div 3</math>? _____</p> <p>(16) The number of even whole numbers between 9 and 20 is _____</p> <p>(17) <math>5 \times 10^3 + 4 \times 10^2 + 6 \times 10^{-2} =</math> _____ (decimal)</p> <p>(18) <math>23 \times 6 - 23 \times 4 =</math> _____</p> <p>(19) MMXXII = _____ (Arabic Numeral)</p> | <p>*(20) <math>667 \times 241 =</math> _____</p> <p>(21) <math>24 - 4 \div 2 =</math> _____</p> <p>(22) <math>8 + 12 + 16 + 20 + 24 =</math> _____</p> <p>(23) <math>\frac{3}{5} =</math> _____ percent</p> <p>(24) <math>2\frac{1}{2}</math> days = _____ hours</p> <p>(25) <math>\frac{7}{18} + \frac{5}{18} =</math> _____</p> <p>(26) <math>69 \times 71 =</math> _____</p> <p>(27) 0.85 = _____ common fraction</p> <p>(28) If 42 ♥ costs 48¢ then 63 ♥ cost _____ ¢</p> <p>(29) <math>\frac{7}{18} \times 36 =</math> _____</p> <p>*(30) <math>222 \times 361 =</math> _____</p> <p>(31) 160 nickels = _____ dimes</p> <p>(32) The product of the two smallest primes greater than 40 is _____</p> <p>(33) 5 quarts = _____ ounces</p> <p>(34) <math>2250 \div 25 =</math> _____</p> <p>(35) <math>11\frac{1}{9} \% =</math> _____ common fraction</p> <p>(36) The LCM of 18 and 24 is _____</p> <p>(37) <math>93 \times 94 =</math> _____</p> |
|--|--|



- (38) The ratio in inches of 2 feet to 2 yards is \_\_\_\_\_
- (39)  $3\frac{1}{5} \times 7\frac{1}{5} =$  \_\_\_\_\_ (mixed number)
- \*(40)  $376 \times 641 =$  \_\_\_\_\_
- (41) The side for a cube with volume  $125 \text{ cm}^3$  is \_\_\_\_\_ cm
- (42)  $23^2 =$  \_\_\_\_\_
- (43) The perimeter of a square with area  $625 \text{ m}^2$  is \_\_\_\_\_ m
- (44)  $2^3 + 2^2 =$  \_\_\_\_\_
- (45)  $8\frac{3}{4} \div \frac{1}{4} =$  \_\_\_\_\_
- (46)  $\sqrt{324} =$  \_\_\_\_\_
- (47) What is the perimeter of a right triangle with legs 12 and 5? \_\_\_\_\_
- (48)  $22 \times 18 =$  \_\_\_\_\_
- (49) If  $x = 25$ , then  $18 + 3x =$  \_\_\_\_\_
- \*(50)  $23 + 202 + 2021 + 2022 =$  \_\_\_\_\_
- (51) What is the number,  $k$ , in the sequence: 64, 32, 16,  $k$ , 4, 2, ...? \_\_\_\_\_
- (52)  $10\frac{3}{8} - 5\frac{5}{8} =$  \_\_\_\_\_ (mixed number)
- (53) If the area of a circle is  $324\pi$ , what is the diameter of the circle? \_\_\_\_\_
- (54) What is the volume of a rectangular box that measures 12" by 8" by 11"? \_\_\_\_\_  $\text{in}^3$
- (55) 123 (base 5) = \_\_\_\_\_ (base 10)
- (56) What whole number cubed minus twenty-five equals thirty-nine? \_\_\_\_\_
- (57) A triangle has sides of 18, 12, and a semiperimeter of 20. What is the third side? \_\_\_\_\_
- (58) If set  $A = \{1, 3, 5, \dots, 11\}$  and set  $B = \{3, 6, 9, 12\}$ , then the number of elements in  $A \cap B$  is \_\_\_\_\_
- (59) What is the perimeter of the square with a side length of  $12\frac{1}{2}$ ? \_\_\_\_\_
- \*(60) 281 days = \_\_\_\_\_ hours
- (61) 74 (base 8) = \_\_\_\_\_ (base 2)
- (62)  $-3^4 \times (2) =$  \_\_\_\_\_
- (63) Two fair dice are thrown. What is the probability that the sum of the two sides showing is 3? \_\_\_\_\_
- (64) 1.5 square miles = \_\_\_\_\_ acres
- (65)  $62^2 =$  \_\_\_\_\_
- (66)  $6^6 \div 7$  has remainder of \_\_\_\_\_
- (67) How many edges does a rectangular box have? \_\_\_\_\_
- (68) If  $3x + 12 < 36$ , then  $x <$  \_\_\_\_\_
- (69)  $\frac{5}{8} + \frac{8}{5} = 2 +$  \_\_\_\_\_
- \*(70)  $111 \times \sqrt{325} =$  \_\_\_\_\_
- (71) The additive inverse of  $-3\frac{1}{4}$  is \_\_\_\_\_
- (72) The area of a square with diagonal 16 is \_\_\_\_\_
- (73) If  $7\frac{1}{2}\%$  of  $x$  is  $22\frac{1}{2}\%$  of 6, then  $x =$  \_\_\_\_\_
- (74)  $(-24) \div (-8) \times (2) =$  \_\_\_\_\_
- (75)  $22^2 + 11^2 =$  \_\_\_\_\_
- (76)  $\left(18\frac{1}{2}\right)^2 - \left(11\frac{1}{2}\right)^2 =$  \_\_\_\_\_
- (77) What is the area of a trapezoid with bases 23, 18 and height 10? \_\_\_\_\_
- (78)  $286 \times 49 =$  \_\_\_\_\_
- (79)  $29^2 + 29 =$  \_\_\_\_\_
- \*(80)  $18 \times 20 \times 22 =$  \_\_\_\_\_

## 2022 – 2023 University Interscholastic League Elementary Number Sense Test B – Key

(1) 18	*(20) 152710 – 168784	(38) $\frac{1}{3}$	(59) 50
(2) 727	(21) 22	(39) $23\frac{1}{25}$	*(60) 6407 – 7081
(3) 21	(22) 80	*(40) 228966 – 253066	(61) 111100
(4) 801	(23) 60	(41) 5	(62) -162
(5) 17	(24) 60	(42) 529	(63) $\frac{1}{18}$
(6) 48	(25) $\frac{2}{3}$	(43) 100	(64) 960
(7) 96	(26) 4899	(44) 12	(65) 3844
(8) 203	(27) $\frac{17}{20}$	(45) 35	(66) 1
*(10) 4068 – 4496	(28) 72	(46) 18	(67) 12
(11) 627	(29) 14	(47) 30	(68) 8
(12) 9	*(30) 76135 – 84149	(48) 396	(69) $\frac{9}{40}$
(13) 192	(31) 80	(49) 93	*(70) 1902 – 2101
(14) 80000	(32) 1763	*(50) 4055 – 4481	(71) $3\frac{1}{4}; \frac{13}{4}; 3.25$
(15) 2	(33) 160	(51) 8	(72) 128
(16) 5	(34) 90	(52) $4\frac{3}{4}$	(73) 18
(17) 5400.06	(35) $\frac{1}{9}$	(53) 36	(74) 6
(18) 46	(36) 72	(54) 1056	(75) 605
(19) 2022	(37) 8742	(55) 38	(76) 210
		(56) 4	(77) 205
		(57) 10	(78) 14014
		(58) 2	(79) 870
			*(80) 7524 – 8316

Note: \*(Number) x – y means an integer between x and y inclusive.

If an answer is of the type like  $\frac{2}{3}$  it cannot be written as .666... or  $\overline{.6}$ .

**University Interscholastic League**  
**2022 – 2023 Elementary Number Sense Test C**

Contestant's Number \_\_\_\_\_

Final		
2 <sup>nd</sup>		
1 <sup>st</sup>		
<b>Score</b>	<b>Initials</b>	

**Read Directions Carefully  
Before Beginning Test**

**Do Not Unfold This Sheet  
Until Told to Begin**

Directions: Do not turn this page until the person conducting this test gives the signal to begin. This is a ten-minute test. There are 80 problems. Solve accurately and quickly as many as you can in the order in which they appear. **ALL PROBLEMS ARE TO BE SOLVED MENTALLY.** Make no calculations with paper and pencil. Write only the answer in the space provided at the end of each problem. Problems marked with a (\*) require approximate integral answers; any answer to a starred problem that is within five percent of the exact answer will be scored correct; all other problems require exact answers.

The person conducting this contest should explain these directions to the contestants.  
**Stop – Wait for Signal!**

- |  |  |
|--|--|
| <p>(1) <math>5 \times 9 =</math> _____</p> <p>(2) <math>277 + 722 =</math> _____</p> <p>(3) <math>79 - 43 =</math> _____</p> <p>(4) <math>1206 \div 6 =</math> _____</p> <p>(5) <math>264 \div 11 =</math> _____</p> <p>(6) <math>17 + 19 + 18 =</math> _____</p> <p>(7) <math>4 \times 7 \times 5 =</math> _____</p> <p>(8) <math>876 - 676 =</math> _____</p> <p>(9) <math>51 \times 8 =</math> _____</p> <p>*(10) <math>2022 + 4981 =</math> _____</p> <p>(11) <math>83 \times 11 =</math> _____</p> <p>(12) Which digit is in the ten-thousandths place in 34976.15820? _____</p> <p>(13) <math>18 \times 12 =</math> _____</p> <p>(14) 78630.4728 rounded to the ten's place is _____</p> <p>(15) What is the remainder for <math>82525 \div 3</math>? _____</p> <p>(16) The number of even whole numbers between 6 and 17 is _____</p> <p>(17) <math>8 \times 10^2 + 3 \times 10^1 + 2 \times 10^{-2} =</math> _____ (decimal)</p> <p>(18) <math>17 \times 7 - 17 \times 3 =</math> _____</p> <p>(19) MMXXIII = _____ (Arabic Numeral)</p> | <p>*(20) <math>335 \times 179 =</math> _____</p> <p>(21) <math>18 - 8 \div 2 =</math> _____</p> <p>(22) <math>9 + 11 + 13 + 15 + 17 =</math> _____</p> <p>(23) <math>\frac{4}{5} =</math> _____ percent</p> <p>(24) <math>1\frac{1}{4}</math> days = _____ hours</p> <p>(25) <math>\frac{11}{18} + \frac{5}{18} =</math> _____</p> <p>(26) <math>29 \times 31 =</math> _____</p> <p>(27) 0.15 = _____ common fraction</p> <p>(28) If 12 ♥ costs 48¢ then 8 ♥ cost _____ ¢</p> <p>(29) <math>\frac{7}{16} \times 48 =</math> _____</p> <p>*(30) <math>777 \times 449 =</math> _____</p> <p>(31) 900 nickels = _____ dimes</p> <p>(32) The product of the two biggest primes smaller than 10 is _____</p> <p>(33) 6 quarts = _____ ounces</p> <p>(34) <math>2250 \div 25 =</math> _____</p> <p>(35) <math>55\frac{5}{9}\%</math> = _____ common fraction</p> <p>(36) The LCM of 12 and 16 is _____</p> <p>(37) <math>99 \times 97 =</math> _____</p> |
|--|--|

- (38) The ratio in inches of 3 feet to 2 yards is \_\_\_\_\_
- (39)  $4\frac{1}{4} \times 8\frac{1}{4} =$  \_\_\_\_\_ (mixed number)
- \*(40)  $376 \times 479 =$  \_\_\_\_\_
- (41) The side for a cube with volume  $64 \text{ cm}^3$  is \_\_\_\_\_ cm
- (42)  $21^2 =$  \_\_\_\_\_
- (43) The perimeter of a square with area  $289 \text{ m}^2$  is \_\_\_\_\_ m
- (44)  $2^4 + 2^3 =$  \_\_\_\_\_
- (45)  $10\frac{3}{5} \div \frac{1}{5} =$  \_\_\_\_\_
- (46)  $\sqrt{625} =$  \_\_\_\_\_
- (47) What is the perimeter of a right triangle with legs 6 and 8? \_\_\_\_\_
- (48)  $44 \times 16 =$  \_\_\_\_\_
- (49) If  $x = 18$ , then  $18 + 3x =$  \_\_\_\_\_
- \*(50)  $23 + 230 + 2023 + 2022 =$  \_\_\_\_\_
- (51) What is the number,  $k$ , in the sequence: 64, 32, 16, 8,  $k$ , 2, ...? \_\_\_\_\_
- (52)  $11\frac{5}{8} - 5\frac{7}{8} =$  \_\_\_\_\_ (mixed number)
- (53) If the area of a circle is  $625\pi$ , what is the diameter of the circle? \_\_\_\_\_
- (54) What is the volume of a rectangular box that measures 8" by 15" by 5"? \_\_\_\_\_  $\text{in}^3$
- (55)  $213$  (base 5) = \_\_\_\_\_ (base 10)
- (56) What whole number cubed plus twenty-five equals fifty-two? \_\_\_\_\_
- (57) A triangle has sides of 14, 17, and a semiperimeter of 25. What is the third side? \_\_\_\_\_
- (58) If set  $A = \{2, 4, 6, \dots, 26\}$  and set  $B = \{3, 6, 12, 22\}$ , then the number of elements in  $A \cap B$  is \_\_\_\_\_
- (59) What is the perimeter of the equilateral triangle with a side length of  $12\frac{1}{3}$ ? \_\_\_\_\_
- \*(60) 188 days = \_\_\_\_\_ hours
- (61)  $67$  (base 8) = \_\_\_\_\_ (base 2)
- (62)  $-4^3 \times (2) =$  \_\_\_\_\_
- (63) Two fair dice are thrown. What is the probability that the sum of the two sides showing is 7? \_\_\_\_\_
- (64) 0.5 square miles = \_\_\_\_\_ acres
- (65)  $53^2 =$  \_\_\_\_\_
- (66)  $4^6 \div 7$  has remainder of \_\_\_\_\_
- (67) How many vertices does a cube have? \_\_\_\_\_
- (68) If  $3x - 12 < 36$ , then  $x <$  \_\_\_\_\_
- (69)  $\frac{4}{9} + \frac{9}{4} = 2 +$  \_\_\_\_\_
- \*(70)  $125 \times \sqrt{255} =$  \_\_\_\_\_
- (71) The additive inverse of  $1\frac{3}{7}$  is \_\_\_\_\_
- (72) The area of a square with diagonal 22 is \_\_\_\_\_
- (73) If  $6\frac{1}{2}\%$  of  $x$  is  $19\frac{1}{2}\%$  of 12, then  $x =$  \_\_\_\_\_
- (74)  $(32) \div (-8) \times (4) =$  \_\_\_\_\_
- (75)  $9^2 + 18^2 =$  \_\_\_\_\_
- (76)  $\left(12\frac{1}{2}\right)^2 - \left(7\frac{1}{2}\right)^2 =$  \_\_\_\_\_
- (77) What is the area of a trapezoid with bases 15, 18 and height 10? \_\_\_\_\_
- (78)  $286 \times 14 =$  \_\_\_\_\_
- (79)  $59^2 + 59 =$  \_\_\_\_\_
- \*(80)  $49 \times 50 \times 51 =$  \_\_\_\_\_

## 2022 – 2023 University Interscholastic League Elementary Number Sense Test C – Key

(1) 45	*(20) 56967 – 62963	(38) $\frac{1}{2}; .5$	(59) 37
(2) 999	(21) 14		*(60) 4287 – 4737
(3) 36	(22) 65	(39) $35\frac{1}{16}$	(61) 110111
(4) 201	(23) 80		(62) -128
(5) 24	(24) 30	*(40) 171099 – 189109	(63) $\frac{1}{6}$
(6) 54	(25) $\frac{8}{9}$	(41) 4	(64) 320
(7) 140	(26) 899	(42) 441	(65) 2809
(8) 200	(27) $\frac{3}{20}$	(43) 68	(66) 1
(9) 408	(28) 32	(44) 24	(67) 8
*(10) 6653 – 7353	(29) 21	(45) 53	(68) 16
(11) 913	*(30) 331430 – 366316	(46) 25	(69) $\frac{25}{36}$
(12) 2	(31) 450	(47) 24	*(70) 1897 – 2095
(13) 216	(32) 35	(48) 704	(71) $-1\frac{3}{7}; -\frac{10}{7}$
(14) 78630	(33) 192	(49) 72	(72) 242
(15) 1	(34) 90	*(50) 4084 – 4512	(73) 36
(16) 5	(35) $\frac{5}{9}$	(51) 4	(74) -16
(17) 830.02	(36) 48	(52) $5\frac{3}{4}$	(75) 405
(18) 68	(37) 9603	(53) 50	(76) 100
(19) 2023		(54) 600	(77) 165
		(55) 58	(78) 4004
		(56) 3	(79) 3540
		(57) 19	*(80) 118703 – 131197
		(58) 3	

Note: \*(Number) x – y means an integer between x and y inclusive.

If an answer is of the type like  $\frac{2}{3}$  it cannot be written as .666... or  $\overline{.6}$ .

Contestant Number \_\_\_\_\_

Contestant Name \_\_\_\_\_  
 (to be filled in after judging)

## UIL A+ Ready Writing Evaluation Sheet: Elementary, Middle School, and Junior High

Evaluation criteria are listed in the order of importance. Write the number that indicates the quality in each of the sub-areas and tally the points.

(50%) \_\_\_\_\_/100

**INTEREST:** Writing exhibits originality of thought, analytical acuteness and overall coherence of exposition.

	<u>POOR</u>	<u>FAIR</u>	<u>GOOD</u>	<u>EXCELLENT</u>
Perceptive ideas	_____/7	_____/13	_____/19	_____/25
Originality	_____/7	_____/13	_____/19	_____/25
Examples	_____/7	_____/13	_____/19	_____/25
Title	_____/7	_____/13	_____/19	_____/25

(35%) \_\_\_\_\_/70

**ORGANIZATION:** Each paragraph develops a clear idea or ideas and contributes to an understanding of the prompt.

	<u>POOR</u>	<u>FAIR</u>	<u>GOOD</u>	<u>EXCELLENT</u>
Student answers prompt consistently <i>(either through supporting details, thesis, and/or plot points and character development)</i>	_____/3	_____/7	_____/11	_____/14
Well-developed paragraphs, focused on an idea or ideas	_____/3	_____/7	_____/11	_____/14
Transition	_____/3	_____/7	_____/11	_____/14
Support for student's response to prompt	_____/3	_____/7	_____/11	_____/14
Composition clarity (as a whole)	_____/3	_____/7	_____/11	_____/14

(15%) \_\_\_\_\_/30

**CORRECTNESS OF STYLE:** Writing avoids errors in sentence structure, punctuation, grammar, word usage and spelling that hinder clear communication.

	<u>POOR</u>	<u>FAIR</u>	<u>GOOD</u>	<u>EXCELLENT</u>
Punctuation	_____/1	_____/3	_____/5	_____/6
Sentence structure	_____/1	_____/3	_____/5	_____/6
Grammar	_____/1	_____/3	_____/5	_____/6
Word Usage	_____/1	_____/3	_____/5	_____/6
Spelling	_____/1	_____/3	_____/5	_____/6

**TOTAL SCORE:** \_\_\_\_\_/200

### CONSTRUCTIVE COMMENTS FOR THE CONTESTANT:

Please read "Instructions for the Judges" for Ready Writing before evaluating contestants' papers. While judges are to consider all three elements in selecting the most effective compositions, they should weigh interest more than organization, and organization more than correctness of style.

### AREAS NEEDING IMPROVEMENT:

Judge's signature \_\_\_\_\_



## 2022-23 A+ Ready Writing

### INVITATIONAL

#### INSTRUCTIONS

Choose **one** of the following topics. Write the topic you have chosen at the top of your paper. **You should also include an original, creative title for your paper.** Remember you should not use your real name or that of your school.

#### THIRD AND FOURTH GRADES

**Topic:** *My Invisibility Cloak*

Write a story entitled "My Invisibility Cloak." You may be as creative as you like.

**Topic:** *Favorite Place*

Think about your favorite place in the world. Write an essay explaining why that place is your favorite.



# 2022-23 A+ Ready Writing

## INVITATIONAL

### INSTRUCTIONS

Choose **one** of the following topics. Write the topic you have chosen at the top of your paper. **You should also include an original, creative title for your paper.** Remember you should not use your real name or that of your school.

### FIFTH AND SIXTH GRADES

**Topic:** *Trying Again*

Someone once said, "If at first you don't succeed, try, try again." Write about a time when you were not successful at first, but then you tried again and succeeded.

**Topic:** *Favorite Gift*

Think about your most favorite gift you ever received. Write an essay explaining why this gift is your favorite.





# 2022-23 A+ Ready Writing

## FALL/WINTER DISTRICT

### INSTRUCTIONS

Choose **one** of the following topics. Write the topic you have chosen at the top of your paper. **You should also include an original, creative title for your paper.** Remember you should not use your real name or that of your school.

### THIRD AND FOURTH GRADES

**Topic:** *Makes Me  
Happy*

Think about things that make people happy. What is one thing that makes you happy? Write an essay explaining what makes you happy and why it makes you feel happy.

**Topic:** *Hero Letter*

Think of a person you consider a hero. Then, write a letter to that person explaining why you think of that person as a hero. Remember you should not use your real name or that of your school.



# 2022-23 A+ Ready Writing

## FALL/WINTER DISTRICT

### INSTRUCTIONS

Choose **one** of the following topics. Write the topic you have chosen at the top of your paper. **You should also include an original, creative title for your paper.** Remember you should not use your real name or that of your school.

### FIFTH AND SIXTH GRADES

**Topic:** *Dream Come True*

Imagine you are given the power to make one of your dreams come true. Write an essay explaining which dream you would choose and explain why you chose that one.

**Topic:** *Good or Bad  
Habit*

Think about a habit that you have that could either be good or bad. Write about one of these habits and explain how it affects your life.



# 2022-23 A+ Ready Writing

## SPRING DISTRICT

### INSTRUCTIONS

Choose **one** of the following topics. Write the topic you have chosen at the top of your paper. **You should also include an original, creative title for your paper.** Remember you should not use your real name or that of your school.

### THIRD AND FOURTH GRADES

**Topic:** *Achieving a Goal*

There are many goals a person can have. Think about one goal you want to achieve. Explain this goal and how you plan on accomplishing it.

**Topic:** *Stormy Day*

Imagine that it is a rainy day, and you are stuck inside. Write an essay explaining the activities you would do while you wait for the storm to pass.



# 2022-23 A+ Ready Writing

## SPRING DISTRICT

### INSTRUCTIONS

Choose **one** of the following topics. Write the topic you have chosen at the top of your paper. **You should also include an original, creative title for your paper.** Remember you should not use your real name or that of your school.

### FIFTH AND SIXTH GRADES

**Topic:** *Favorite Family Tradition*

Many people have family traditions. Think about your own family traditions and decide which tradition is your favorite. Write an essay about this tradition and explain why it is your favorite.

**Topic:** *Average White House Day*

Imagine you have the power to view what life is like in the White House. Write a story explaining the average daily activities that occur in the White House.

CONTESTANT NUMBER:

**FOR GRADER USE ONLY**

Score Test Below:

\_\_\_\_\_ Initials \_\_\_\_\_

\_\_\_\_\_ Initials \_\_\_\_\_

Papers contending to place:

\_\_\_\_\_ Initials \_\_\_\_\_



**University Interscholastic League  
A+ Science Contest • Answer Sheet**

*Write your contestant number in the upper right corner and circle your grade level below.*

**Circle Grade Level:**

6th grade

7th grade

8th grade

1. \_\_\_\_\_

18. \_\_\_\_\_

35. \_\_\_\_\_

2. \_\_\_\_\_

19. \_\_\_\_\_

36. \_\_\_\_\_

3. \_\_\_\_\_

20. \_\_\_\_\_

37. \_\_\_\_\_

4. \_\_\_\_\_

21. \_\_\_\_\_

38. \_\_\_\_\_

5. \_\_\_\_\_

22. \_\_\_\_\_

39. \_\_\_\_\_

6. \_\_\_\_\_

23. \_\_\_\_\_

40. \_\_\_\_\_

7. \_\_\_\_\_

24. \_\_\_\_\_

41. \_\_\_\_\_

8. \_\_\_\_\_

25. \_\_\_\_\_

42. \_\_\_\_\_

9. \_\_\_\_\_

26. \_\_\_\_\_

43. \_\_\_\_\_

10. \_\_\_\_\_

27. \_\_\_\_\_

44. \_\_\_\_\_

11. \_\_\_\_\_

28. \_\_\_\_\_

45. \_\_\_\_\_

12. \_\_\_\_\_

29. \_\_\_\_\_

46. \_\_\_\_\_

13. \_\_\_\_\_

30. \_\_\_\_\_

47. \_\_\_\_\_

14. \_\_\_\_\_

31. \_\_\_\_\_

48. \_\_\_\_\_

15. \_\_\_\_\_

32. \_\_\_\_\_

49. \_\_\_\_\_

16. \_\_\_\_\_

33. \_\_\_\_\_

50. \_\_\_\_\_

17. \_\_\_\_\_

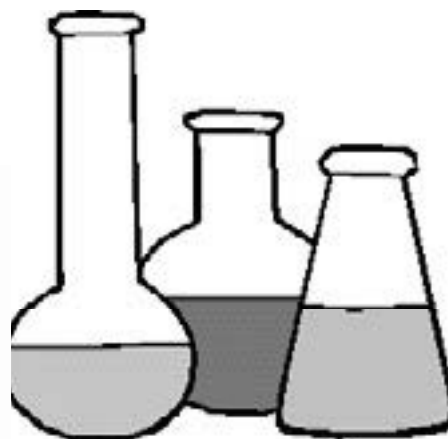
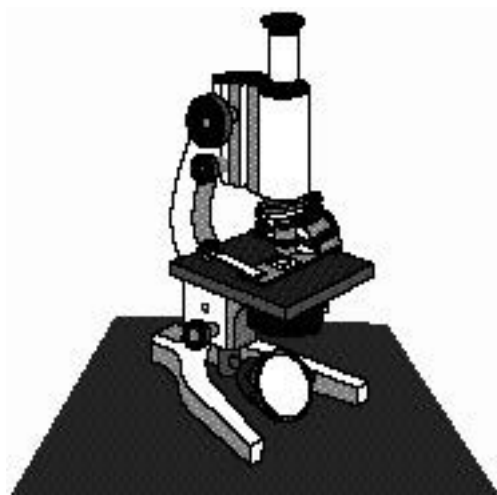
34. \_\_\_\_\_

**INVITATIONAL 2022-2023**

**A+ ACADEMICS**



University Interscholastic League



# Science

**DO NOT OPEN TEST  
UNTIL TOLD TO DO SO**

**UNIVERSITY INTERSCHOLASTIC LEAGUE  
2022-2023 SCIENCE  
INVITATIONAL TEST**

1. A student heats 50 mL of water and places it in a beaker. They then place a sugar cube in the heated water and records the temperature of the water every minute for ten minutes. In this experiment, what does the temperature represent?

A. Independent variable  
B. Control  
C. Dependent variable  
D. Responsive variable

2. Based on the chemical equation, how many different elements and compounds are represented?



A. Elements – 3 Compounds – 2  
B. Elements – 4 Compounds – 2  
C. Elements – 2 Compounds – 3  
D. Elements – 4 Compounds – 3

3. When a fruit is produced the energy located in the fruit is \_\_\_ energy until it is transformed during the process of digestion.

A. Kinetic  
B. Electric  
C. Chemical potential  
D. Mechanical

4. Which of the following best explains why a hot dog is able to cook over a campfire when it is placed on a metal pole as shown?

A. Conduction  
B. Convection  
C. Radiation

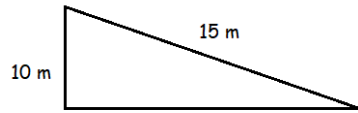


5. In which of tectonic plate would you find Rio de Janeiro, Brazil?

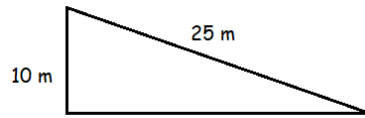
A. Pacific  
B. Nazca  
C. African  
D. South American

6. Which of the following would require the least amount of force?

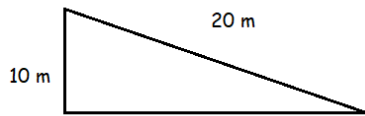
A.



C.



B.



D.

All are equivalent forces

7. The gravity on Mars is a little over one third of the gravity here on Earth. Of you could jump 3 meters on Earth, how far could you jump on Mars if you were to use the same amount of force?

A. 1 meter

C. 9 meters

B. 3 meters

D. 12 meters

8. A student has mistakenly classified this organism as being prokaryotic. Which evidence best explains the error in classification?

A. The cell has a nucleus

B. The cell is from a plant

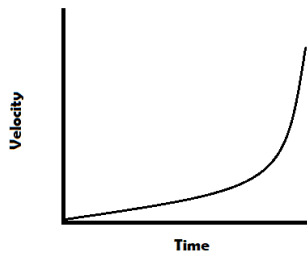
C. The cell lacks a nucleus

D. The cell is a bacteria

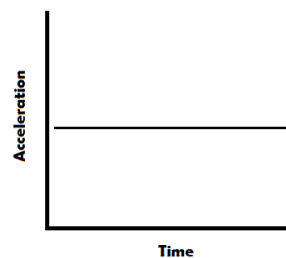


9. A train is moving at a constant velocity. Which graph best shows this?

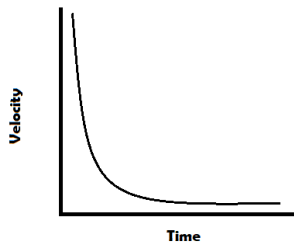
A.



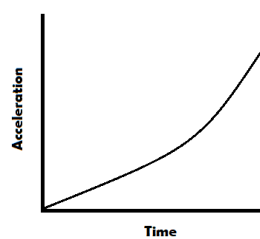
C.



B.



D.





10. Melting butter demonstrates which of the following?  
 A. Physical change  
 B. Chemical change
11. You find a ring with a mass of 107 g laying on the sidewalk. You fill a graduated cylinder up with 10 mL of water and put the ring into the cylinder. The water rises up to the 15 mL mark. Based on the table, what type of material is the ring made from?

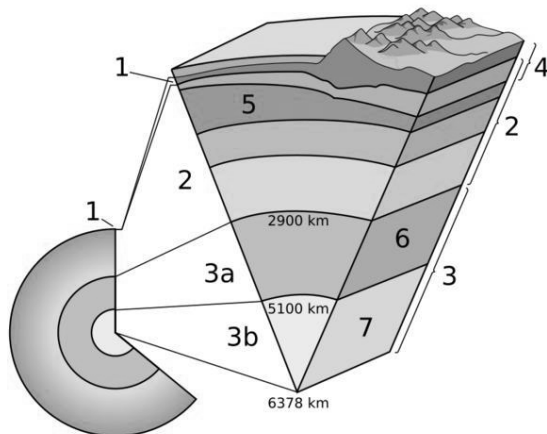
Density Table			
Material	Density (g/cm <sup>3</sup> )	Material	Density (g/cm <sup>3</sup> )
Copper	8.92	Gold	19.32
Platinum	21.4	Silver	10.49

- A. Copper  
 B. Silver  
 C. Gold  
 D. Platinum
12. On a hot summer day, a child is selling lemonade. Which of the following items used in the lemonade would be the least dense?  
 A. Cup  
 B. Sugar  
 C. Citric acid  
 D. Ice
13. All of the following can be considered renewable except for –  
 A. Hydroelectric dam  
 B. Nuclear power plant  
 C. Geothermal heating  
 D. Windmills
14. Which of the following lists has only biotic factors?  
 A. temperature, Daphnia, snail, guppy  
 B. temperature, pH, conductivity, sunlight  
 C. snail, guppy, Daphnia, algae  
 D. snail, algae, guppy, sunlight

15. Which of the following will have a greater impact on kinetic energy of an object?  
 A. Mass  
 B. Velocity  
 C. Gravitational force

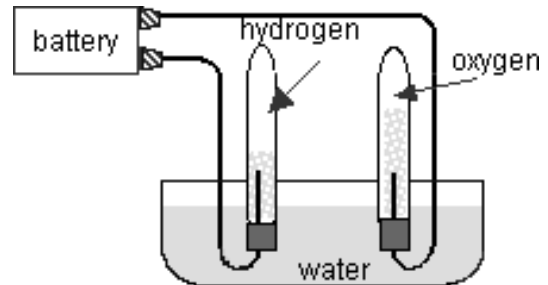
16. Looking at the model of the Earth, which structure is indicated at Position 4?

- A. Inner Core  
 B. Outer Core  
 C. Asthenosphere  
 D. Lithosphere



17. Simple machines are useful when moving heavy objects because they-
- A. require less work
  - B. require less input force
  - C. do work for us
  - D. move things over shorter distances
18. Photosynthesis requires two raw materials. They are
- A. Chlorophyll and  $O_2$
  - B.  $H_2O$  and sugar
  - C.  $H_2O$  and  $CO_2$
  - D.  $O_2$  and  $CO_2$

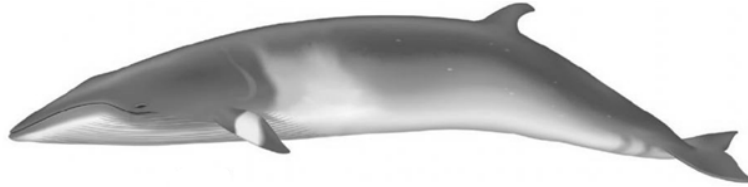
19. Based on the image, this best shows a –
- A. Chemical change
  - B. Physical change
  - C. Unbalanced reaction
  - D. Photosynthetic reaction



20. Mechanical or physical weathering is the process by which rock is broken down into smaller pieces by physical changes. Some ways that rock can be broken down physically include all of the following except:
- A. Temperature fluctuation
  - B. Abrasion
  - C. Oxidation
  - D. Plant growth
21. How can large volcanic eruptions and meteorite collisions have similar effects on Earth's climate?
- A. Both can cause the greenhouse effect to increase global warming
  - B. Both give off large forces that change the tilt of Earth's axis
  - C. Both cause acidic rain from the gases and particles they give off into Earth's troposphere
  - D. Both put huge volumes of dust and ash into the atmosphere, blocking the sun's energy
22. Earth supports life while the nearby Moon does not. All of the following are reasons why the Moon cannot support life compared to the Earth except:
- A. Abundance of water
  - B. Distance from Sun
  - C. Atmosphere
  - D. Lack of natural resources
23. An oak forest is an example of a climax community because of which of the following:
- A. The mature oak trees block sunlight below them, not allowing smaller trees and grasses to grow
  - B. The oak trees will grow and reproduce until they are disturbed or killed by man or nature
  - C. Oak trees are the largest vegetation that grows in the area
  - D. All of the above are true

24. Secondary succession will take place in each of these ecosystems except –
- A. An abandoned field
  - B. A shallow pool of water
  - C. A volcanic lava flow that forms a new island
  - D. A forest which has been clear-cut

25. Use the image and the Dichotomous key to correctly identify the whale shown.

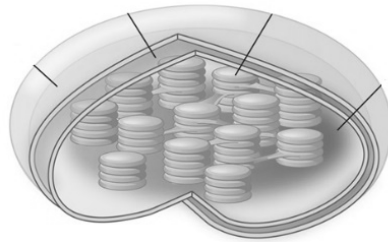


1a. Mouth with baleen (no teeth).....	6
1b. Mouth with teeth (no baleen).....	2
2a. Large melon (head) .....	Sperm Whale
2b. Small rounded head.....	3
3a. Distinct black and white markings on body .....	Orca
3b. Body mostly gray .....	4
4a. Has defined beak or “snout” .....	Bottlenose Dolphin
4b. No beak, rounded “snout” .....	6
5a. Specked markings on sides.....	Harbor Porpoise
5b. Body all gray, usually cover with scratches.....	Risso’s Dolphin
6a. Long pectoral fin/flippers with knobs on fins & head.....	Humpback Whale
6b. Shorter pectoral fin/flippers, smooth fins and head.....	7
7a. White band on pectoral fin/flipper .....	Minke Whale
7b. No white band on pectoral fin/flipper.....	8
8a. Body covered in barnacles, no dorsal fin, has dorsal knuckles .....	Gray Whale
8b. No barnacle growth on body, dorsal fin present.....	9
9a. Body solid blue color .....	Blue Whale
9b. Body with gray and white patterns .....	Fin Whale

- A. Orca
- B. Gray Whale
- C. Fin Whale
- D. Minke Whale

26. Which of these is a reaction to an internal stimulus?
- A. A runny nose when breathing dusty air
  - B. Itchy red skin when exposed to poison ivy
  - C. Your eyes become red and itchy when you are exhausted
  - D. Blisters on skin when sunburned

27. A designer who is building a new nose cone for rockets would choose materials with all these properties except
- A. Low density
  - B. High heat conductivity
  - C. Malleability
  - D. High melting point
28. Which of the following illustrates the hierarchy of cellular organization?
- A. cell, population, organ system, cell, community
  - B. molecule, cell, organ, organ system, organism
  - C. organism, organ system, population, organ, community
  - D. molecule, organ, organ system, organism, population



29. The structure seen is responsible for which of the following functions in a cell?
- A. Captures sunlight used in photosynthesis
  - B. Powerhouse of the cell
  - C. Directs cellular activities
  - D. Synthesizes and stores materials
30. An individual left a plant outside for several days without tending to it in the summer. The person noticed that the plant was beginning to wilt. Wilting in plants is a result of which of the following?
- A. Decrease in  $H_2O$
  - B. Lack of  $CO_2$
  - C. Increase in radiant energy
  - D. Decrease in  $O_2$
31. If a diploid cell of an organism contains 90 chromosomes. What would an egg or a sperm cell of this organism would be expected to have this number of chromosomes?
- A. 90
  - B. 180
  - C. 45
  - D. 23
32. A neutral atom contains 20 neutrons, 18 electrons as well as protons. What would be the atomic number of this particular atom?
- A. 18
  - B. 20
  - C. 28
  - D. 40

33. Which best describes the following scenario:  
A drone taking off and heading south at 25 kilometers per hour
- A. An example of speed
  - B. An example of acceleration
  - C. An example of speed and acceleration
  - D. An example of velocity and acceleration

34. What do the elements shown to the right have in common?
- A. They are noble gases
  - B. They do not form compounds with any other elements
  - C. They react with water to form salts
  - D. They are silvery solids that react with non-metals

3	6,94*	<b>Li</b>
11	22,99	<b>Na</b>
19	39,10	<b>K</b>
37	85,47	<b>Rb</b>
55	132,9	<b>Cs</b>

35. Scientists can tell that the sun rotates on its axis by observing which of the following:
- A. How the sunspots moving across the sun's surface from East to West
  - B. Changing magnetic forces coming from the sun
  - C. Fluctuating amounts of solar winds due to solar flares
  - D. Time that the sun rises and sets on Earth
36. Spring Tide occurs when
- A. There is a full moon
  - B. The Sun, Moon, and Earth are all aligned
  - C. At the first quarter and third quarter moons
  - D. When the Sun and Earth are the at their perihelion
37. Oxygen has an atomic number of 16. How many more electrons will it take to fill the valence shell and make it stable?
- A. 1                                      B. 2                                      C. 3                                      D. 8
38. The Virgo Cluster, unlike most other galaxies in the universe, has been observed with a blue shift. What does this mean?
- A. Movement of the source toward the observer
  - B. Movement of the source away from the observer
  - C. The source is not moving

39. Which of the following stars would have the lowest surface temperature?
- A. A Red dwarf
  - B. A White star
  - C. A Red Giant
  - D. A Yellow Star
40. Redshift and blueshift are used by astronomers to work out how far an object is from Earth. The concept of redshift and blueshift is closely related to which of the following
- A. Big Bang Theory
  - B. Theory of Relativity
  - C. Doppler Effect
  - D. Coulomb's Law
41. Which of the following would most likely result from a collision between a continental lithospheric plate and an oceanic lithospheric plate?
- A. Volcanic island arc
  - B. Chain of coastal volcanic mountains
  - C. Mid-oceanic ridge
42. If an active cold front overtakes a warm front which of the following occurs:
- A. An occluded front forms
  - B. The fronts cancel each other out due to interference
  - C. Cloud formation increases
  - D. A stationary front forms
43. Another form of interdependence between organisms is called symbiosis. There are several types of symbiosis. The difference between each type is determined by how beneficial or harmful the relationship is to the organisms. When one organism benefits and the other one remains constant or neutral, this is called...
- A. Mutualism
  - B. Commensalism
  - C. Colonialism
  - D. Parasitism
44. Only ten percent of energy stored in an organism is passed on to the next higher trophic level. Of the remaining energy, some is used for life processes, and the rest is
- A. Used in reproduction
  - B. Stored in lipids
  - C. Stored in muscles
  - D. Eliminated as thermal energy
45. During the drought in Texas, numerous deer temporarily left their usual territory to drink from water troughs that were being filled by farmers and ranchers. This behavior was probably due to:
- A. The need to find different food sources
  - B. The change in an abiotic factor in its natural environment
  - C. The need to find a new habitat
  - D. The change in a biotic factor in its natural environment

46. An excess of hot water is released into a reservoir, which of the following is most likely to immediately occur?
- A. An increase in pollution in the bay
  - B. A decrease of pollution in the bay
  - C. A decrease in the dissolved oxygen level
  - D. An increase in carbon-based compounds
47. Suppose you were making a circle graph of the following information about a laboratory budget. They said that 5% of their budget goes to consumables, 10% goes into equipment, 80% of the monthly income goes to paying all debts, and the remaining 5% is used for miscellaneous expenses that arise. How large of a section, in degrees, would the debts take up?
- A.  $360^\circ$                       B.  $288^\circ$                       C.  $36^\circ$                       D.  $18^\circ$
48. A spilled liquid base can be best neutralized with:
- A. Sodium bicarbonate
  - B. Water
  - C. Hydrochloric acid
  - D. Sodium hydroxide
49. When a scientist compares two objects or events, what is he or she most likely looking for?
- A. How the data was collected
  - B. Causes and effects for the data
  - C. Similarities in the data
  - D. Errors in the data collection
50. Which of the following is most likely correct?
- A. You can accept or reject a hypothesis, but never prove it to be true
  - B. You can always prove a hypothesis to be true
  - C. You can always prove a hypothesis to be false
  - D. Accepting or rejecting a hypothesis is the same as proving whether or not the hypothesis is true

**UNIVERSITY INTERSCHOLASTIC LEAGUE  
2022-2023 SCIENCE  
INVITATIONAL TEST**

Answer Key

1. A	18. C	35. A
2. B	19. A	36. B
3. C	20. C	37. B
4. A	21. D	38. A
5. D	22. B	39. A
6. C	23. D	40. C
7. C	24. C	41. B
8. A	25. D	42. A
9. C	26. C	43. B
10. A	27. B	44. D
11. D	28. B	45. B
12. D	29. A	46. C
13. B	30. A	47. B
14. C	31. C	48. A
15. B	32. A	49. C
16. D	33. D	50. D
17. B	34. D	

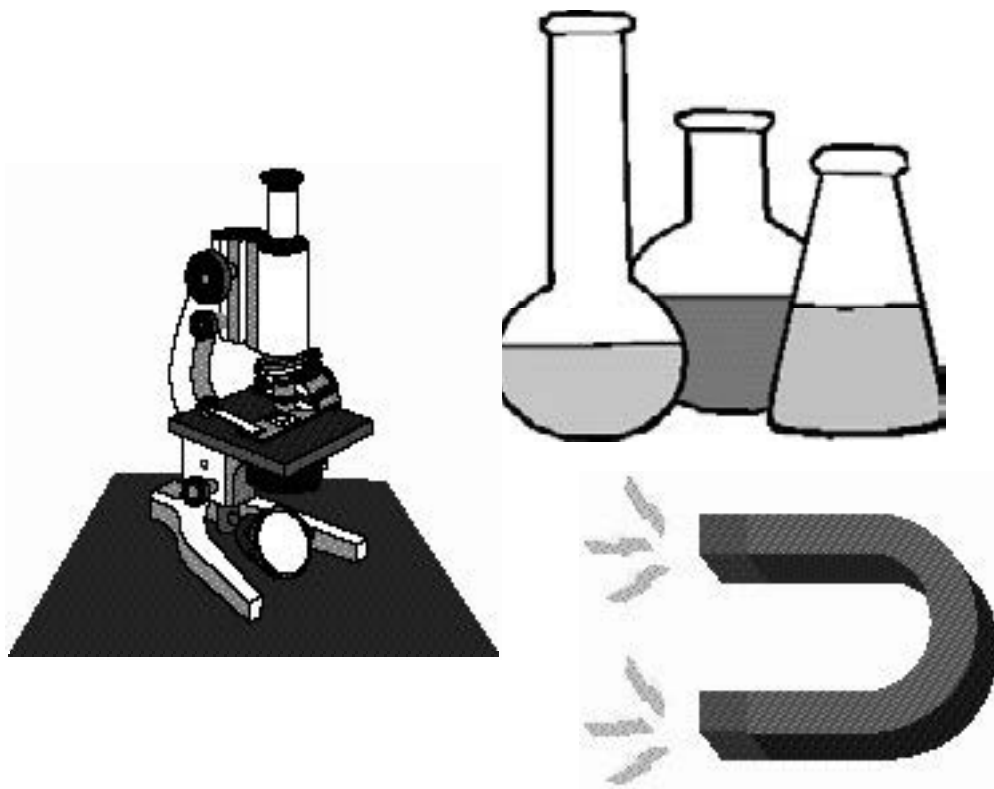


**FALL/WINTER DISTRICT 2022-2023**

**A+ ACADEMICS**



University Interscholastic League

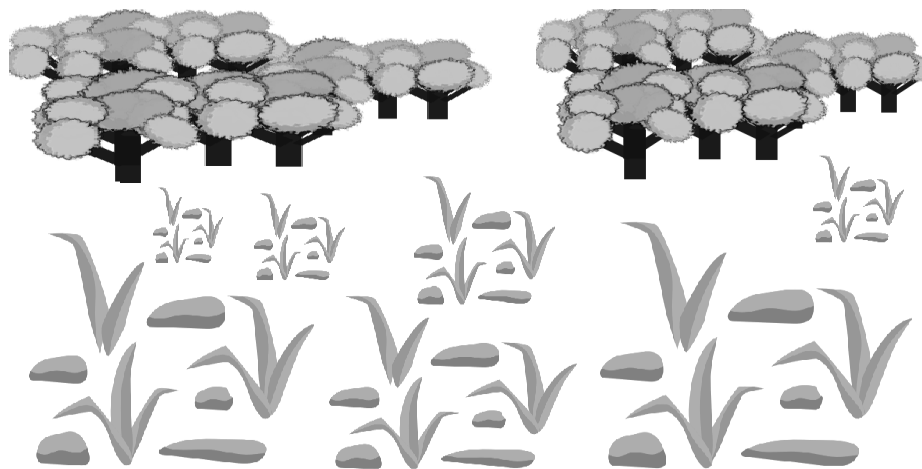


# Science

**DO NOT OPEN TEST  
UNTIL TOLD TO DO SO**

**UNIVERSITY INTERSCHOLASTIC LEAGUE  
2022-2023 SCIENCE  
FALL/WINTER DISTRICT TEST**

1.



Students are labeling the illustration with the most abundant elements. Which list of elements best labels the living matter represented in the illustration?

- A. O, S, H
- B. Na, H, O

- C. C, H, O
- D. Na, S, He

2. Which of the following is not a good characteristic to use to determine the type of mineral?

- A. Shape
- B. Color

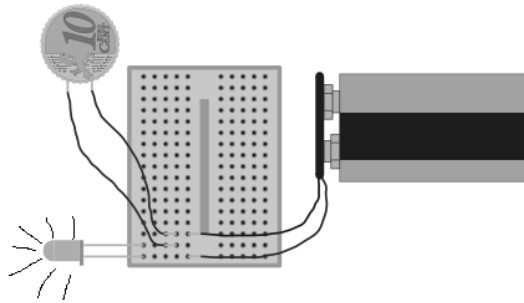
- C. Hardness
- D. Luster

3. What happens to the motion of gas molecules as the air temperature drops below zero degrees Celsius?

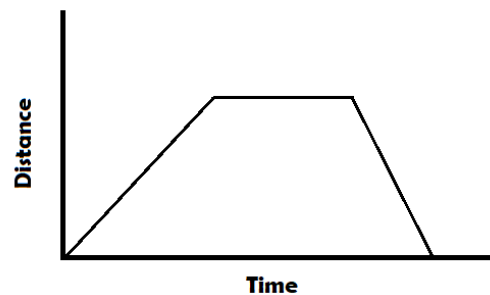
- A. Molecules move more randomly
- B. Molecular speed decreases
- C. Molecular speed increases
- D. Molecule remain constant

4. Due to increased temperature and pressure sedimentary rocks can transform into metamorphic rocks. What other type of rock transformation can have increased temperature and pressure also form?

- A. Igneous to metamorphic
- B. Sediment to sedimentary
- C. Metamorphic to sediment
- D. Igneous to sediment



5. The light turned on when the item was placed in the circuit as shown. The item could not be classified as a –
- Metal
  - Metalloid
  - Non metal
  - Semiconductor
6. An individual changes the color of the bottom of a swimming pool from beige to black because they heard it would increase the temperature of the water in the pool. The new color will help warm the pool water by transforming –
- Nuclear energy from the sun
  - Chemical energy in the paint
  - Thermal energy from the paint
  - Radiant energy from the sun
7. A plant grown on Earth and on the ISS would most likely differ in which way?
- Pigments of leaves
  - Shape of roots
  - Phototropism
  - Minerals needed
8. What type of motion would best describe the motion of the graph shown?
- Launch of a rocket
  - Driving to school and back
  - Flight to Canada
  - Motion of clock hands

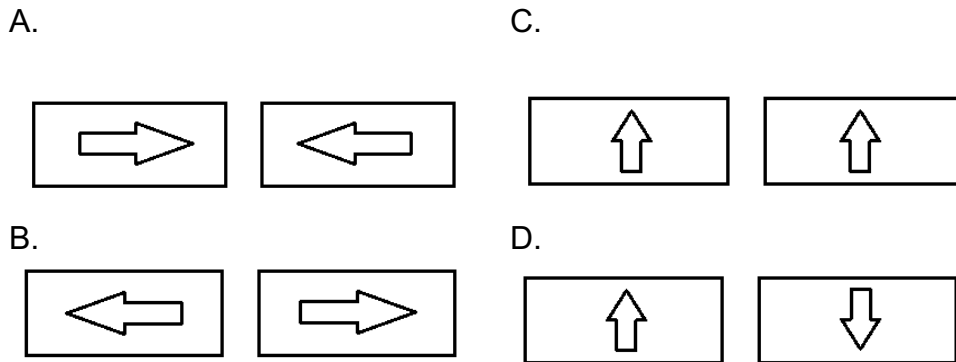


9. There are four ramps all at an incline of 25 degrees, the only different is the distance at which it takes to push the box up the ramp. Which of the following would require the least amount of force to lift a box?
- Ramp of 10 meters
  - Ramp of 20 meters
  - Ramp of 25 meters
  - All the same

10. The following tables shows the development of space exploration in stages. Which item correctly completes the missing area?

First satellite launched into orbit
Animals sent into space
Humans walk on the moon
?

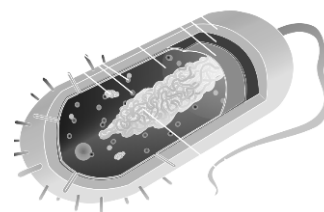
- A. Humans to outer space  
 B. Explorer I launches  
 C. ISS sent into orbit  
 D. Pioneer I launched
11. Which shows the correct movement of the tectonic plates where the location of the Andes mountains formed?



12. Some plants use brightly colored flowers to attract pollinators. Which is the most likely conclusions about a plant that has small flowers that are hard to see?
- A. Doesn't produce a seed  
 B. Wind pollination plant  
 C. Ornamental plant  
 D. Reproduce binary fission

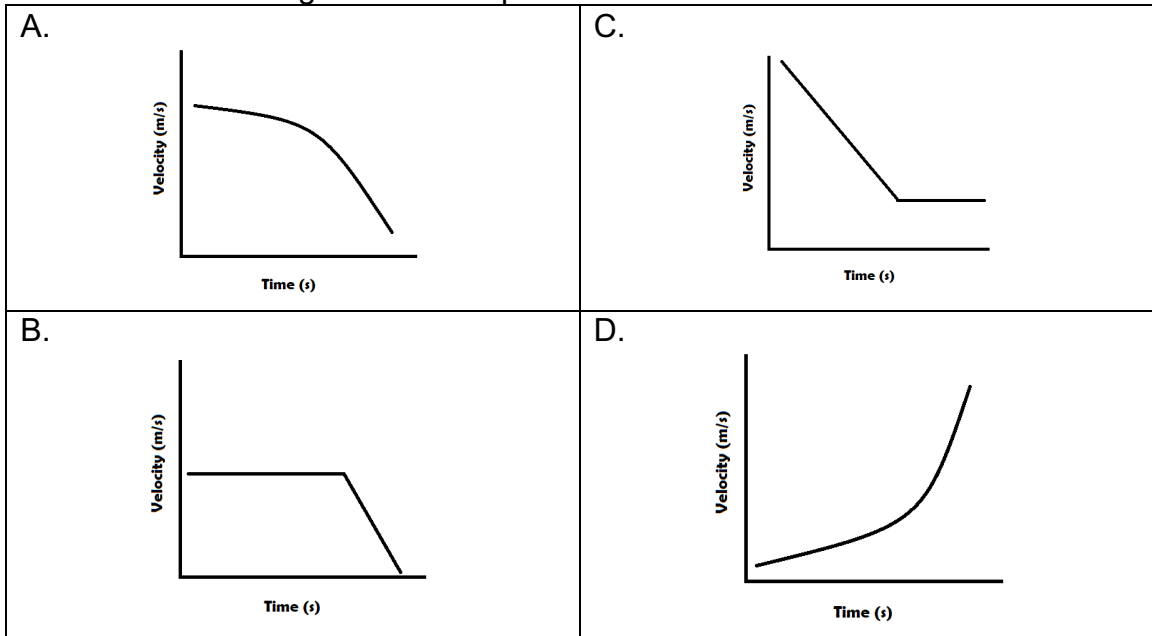
13. A student has classified this cell as being prokaryotic. What evidence is there to support this claim?

- A. Cell has a nucleus  
 B. Cell is from an animal  
 C. Cell lacks a nucleus  
 D. Cell is from a plant

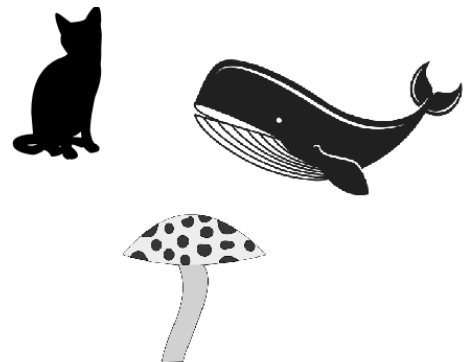


14. Which Texas region would most be affected by wind erosion?
- A. Panhandle
  - B. Pineywoods
  - C. Hill Country
  - D. All areas are the same
15. The instructions for a lab warned to avoid putting K in the liquid used in the lab. What element should not be placed in the liquid?
- A. Nitrogen
  - B. Carbon
  - C. Potassium
  - D. Krypton

16. Which of the following would show positive acceleration?



17. What do the three organisms have in common?
- A. All autotrophic
  - B. Composed of cells
  - C. All are omnivores
  - D. Are mammals

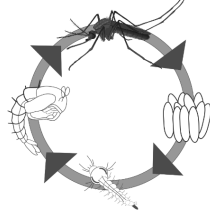


18. According to the US EPA, too much ground water discharge to streams can lead to erosion and alter the balance of aquatic plants and animals. Which human activity does this likely refer to?

- A. Hurricane
- B. Pumping water into the ground for gas extraction
- C. Overfishing
- D. Deforestation

19. Which image best shows an ecosystem?

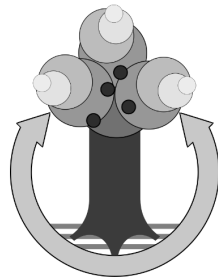
A.



C.



B.



D.



20. As the sun begins to die, in roughly 5 billion years, it will expand. Why will the Earth no longer be in the habitable zone?

- A. Gravity will increase
- B. Tides will increase
- C. Earth will become too hot
- D. Gravity will cause the asteroid belt to move into a closer orbit

21. Which environment would experience the greatest change in total number and type of species over time?

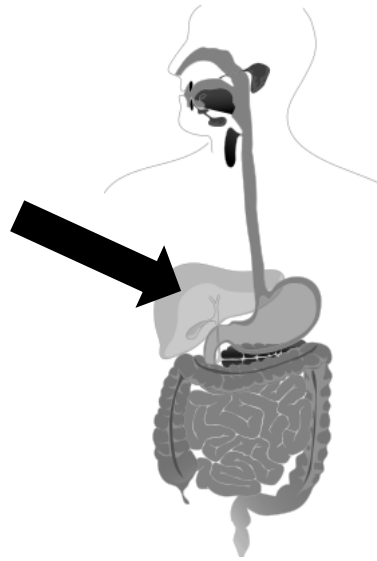
- A. Pioneer species
- B. Intermediate species
- C. Secondary succession
- D. Climax community

22. A swim bladder is an internal gas filled organ that contributes to the ability of many bony fish to do which of the following?

- A. Allows the fish to see deeper in the water
- B. Allows the fish to scare off predators by increasing in size
- C. Allows for extra storage of food
- D. Allow the fish to vary buoyancy in water

23. What is represented by the arrow in the diagram?

- A. Tissue
- B. Organ system
- C. Organ
- D. Cell



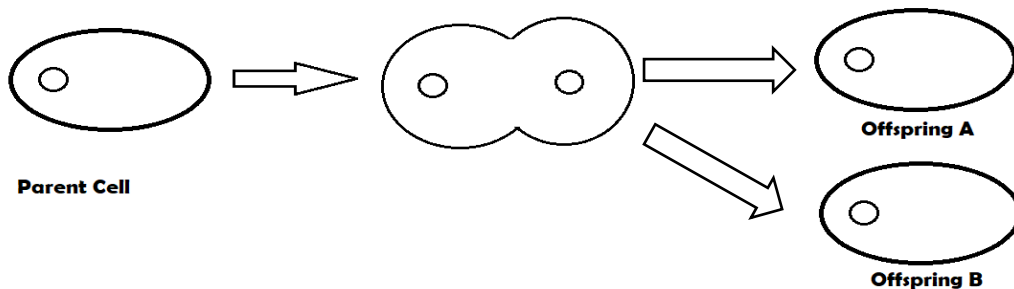
24. If a human notices a decrease in the production of urine, this could mean that the body could be having which of the following?

- A. Fever
- B. Dehydration
- C. Asthma
- D. Broken bone

25. A student is looking at a family photo album. The student notices that they look very similar to their great grandparents. What allows them to look similar to their relatives?

- A. Similar chromosomes
- B. Similar proteins
- C. Similar thylakoids
- D. Similar cell walls

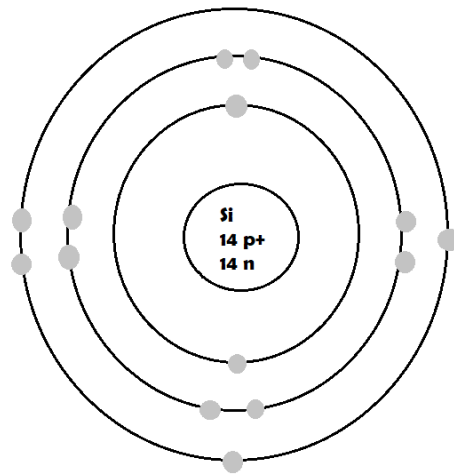
26. Based on the illustration. Which statement about the cells is correct?



- A. Bile destroys the genetic info in the parent cell which left the offspring viable
- B. Cells reproduce slowly due to acids within the organisms
- C. Cell A has different genetic information compared to Cell B
- D. Cell A has identical genetic information compared to Cell B

27. Which animal cell organelle is capable of reproducing independently within the cell?
- A. Cell wall  
B. Mitochondria  
C. Chloroplast  
D. Vacuole
28. A volleyball player notices that the harder the ball is hit, the more their hand hurts afterwards. Which law best explains this?
- A. Newton's 1<sup>st</sup> Law of motion  
B. Newton's 2<sup>nd</sup> Law of motion  
C. Newton's 3<sup>rd</sup> Law of motion  
D. Newton's 0<sup>th</sup> Law of motion
29. Students place a plant in a dark, windowless closet for two days. Which of these will help the plant maintain homeostasis?
- A. Growth of deeper roots  
B. Using stored sugars  
C. Decreasing diameter of the stem  
D. Going dormant

30. In the Bohr model of the atom shown, how many more electrons would it take to fill the valence shell and be stable
- A. 2  
B. 4  
C. 8  
D. 0

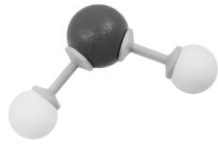


31. Students are given an activity which they are asked to classify the types of energy present in various physical situations found around their school. Which of the following best represents a conclusion that the students might write about in a lab report over the activity?
- A. All objects with kinetic energy can be found over 3 meters high.  
B. All objects with kinetic energy are cold.  
C. All objects with kinetic energy are macroscopic.  
D. All objects with kinetic energy must be in motion.

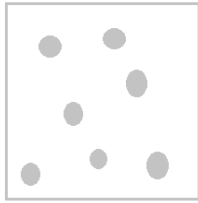


32. Which best illustrates a compound?

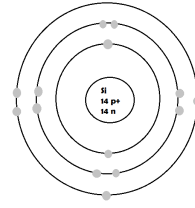
A.



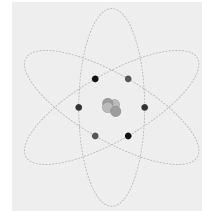
B.



C.



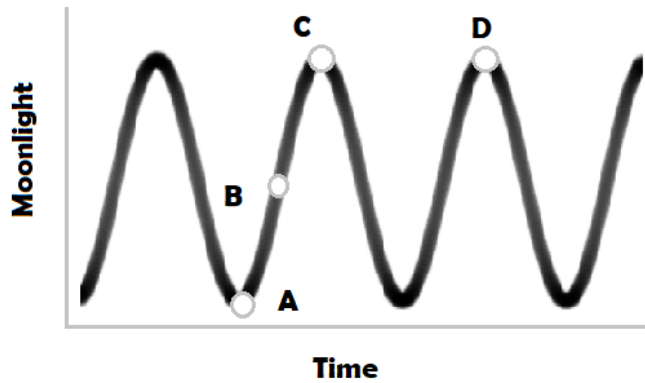
D.



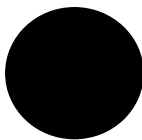
33. In an energy pyramid, at what level is the most usable energy available?

- A. Primary consumer
- B. Producer
- C. Secondary consumer
- D. Decomposer

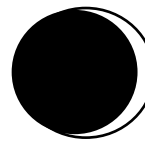
34. Based on the graph, what moon phase matches point B?



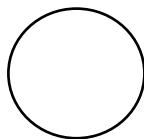
A.



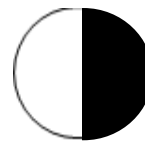
C.



B.



D.



35. Which star listed will have the largest numerical value for apparent magnitude?
- A. Our moon
  - B. White dwarf
  - C. Blue white super giant
  - D. Red giant
36. The very large array is a compilation of twenty-seven radio telescopes used to capture radio waves. The entire array is arranged with diameters of around 22 miles. Why are radio telescopes so large?
- A. Radio waves are very difficult to detect
  - B. Only certain stellar objects emit radio waves
  - C. So the radio waves can be controlled remotely
  - D. The wavelength of waves can be as long as mountain ranges
37. This individual helped strengthen the theory of plate tectonics. Before this person's explanations, most scientists believed that the continents did move but there were no good explanations. This person suggested the ocean floor moved and could push landmasses. The individual provided evidence using seafloor spreading to explain how continents move?
- A. Hess
  - B. Wegner
  - C. Hutton
  - D. Einstein
38. Ocean currents move warm and cold water throughout the oceans affecting weather and climate worldwide. Where do cold ocean currents originate from?
- A. Near the equator
  - B. Near the continents
  - C. Near the poles
  - D. In the middle of the oceans
39. A student is working with several chemicals in a lab. They wonder what would happen if they mixed the chemicals together. Which of the following should they not do?
- A. Wait for the teacher's instructions
  - B. Taste the chemicals before mixing them
  - C. Mix chemicals without instructions
  - D. Read the entire procedures for the lab before mixing any chemicals
40. A study of plant roots over time in an area showed that early plants had shallow root systems that stayed near the surface. Most recent plant life in the same area showed root systems that extend deep into the ground. Based on this information, plant species in this area lived changed from –
- A. Mountain region to hills
  - B. Forest to tundra
  - C. Grassland to desert
  - D. Desert to tundra

41. When commercial airplanes have to land or take off on short runways, it can be a rough flight. Why might passengers consider it unpleasant?
- A. The shorter the runways, the acceleration for takeoff or landing has to be greater.
  - B. The sight of a short runway can make people nervous.
  - C. The sight of the short runway can distract the pilots.
  - D. The runways are shorter, the velocity for takeoff or landing has to be lower.
42. This lab equipment is used to hold and heat small amounts of a liquid but doesn't have marked measurements. Which piece of equipment best identifies it?
- A. Graduated cylinder
  - B. Beaker
  - C. Pipette
  - D. Test tube
43. When someone talks about "how fast", what are they actually referring to?
- A. Time
  - B. Velocity
  - C. Speed
  - D. Acceleration
44. The heights of twins are measured yearly. What type of graph would be used to represent this?
- A. Line graph
  - B. Scatter plot
  - C. Bar graph
  - D. Circle graph
45. Which group readily donates electrons?
- A. Noble gases
  - B. Metals
  - C. Non-metals
  - D. Halogens
46. This is a comprehensive explanation of some aspect of nature that is supported by a vast body of evidence. Which of the following would not be an example of the previous description?
- A. The Big Bang
  - B. Plate Tectonics
  - C. Evolution by natural selection
  - D. Universal Gravitation
47. Elements in Group 18 are referred to as the noble gasses. What makes these elements unlikely to react?
- A. Number and placement of the electrons
  - B. Number of ions present
  - C. Number and placement of the neutrons
  - D. Number of protons

48. This individual developed a mathematical model for the structure of the nuclear shells of atoms. The theory of the structure of nuclear shells illustrated that protons and neutrons pair up within the nucleus of the atom. What scientist does this most likely refer to?
- A. Yalow
  - B. Rutherford
  - C. Goeppert – Mayer
  - D. Thomson
49. Two theories for the origins of the universe were discussed in class. The Big Bang Theory as well as the Big Crunch Theory. One main difference between the two is that –
- A. The date on which the universe started
  - B. How the universe began
  - C. The purpose of the universe
  - D. How the universe changes
50. How are humans classified within a food web?
- A. Autotrophic
  - B. Consumers
  - C. Decomposers
  - D. Producers

**UNIVERSITY INTERSCHOLASTIC LEAGUE  
2022-2023 SCIENCE  
FALL/WINTER TEST**

**Answer Key**

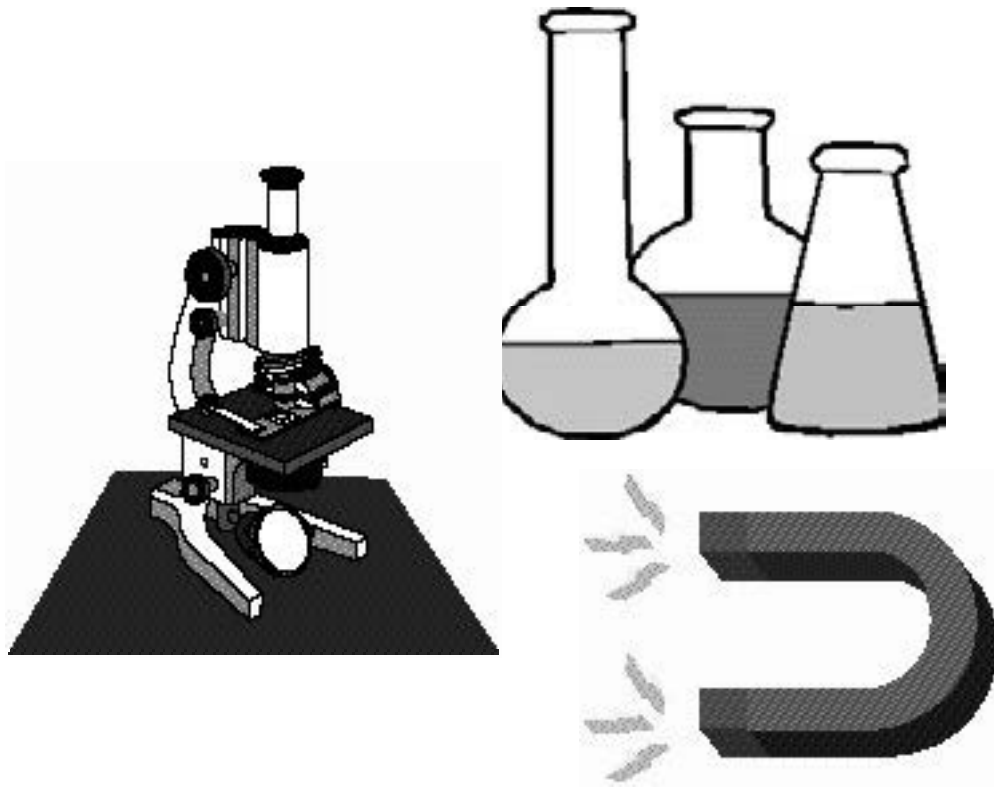
1. C	18. B	35. C
2. A	19. C	36. D
3. B	20. C	37. A
4. A	21. B	38. C
5. C	22. D	39. B
6. D	23. C	40. C
7. C	24. B	41. A
8. B	25. A	42. D
9. C	26. D	43. C
10. C	27. B	44. A
11. A	28. C	45. B
12. B	29. B	46. D
13. C	30. B	47. A
14. A	31. D	48. C
15. C	32. A	49. D
16. D	33. B	50. B
17. B	34. D	

**SPRING DISTRICT 2022-2023**

**A+ ACADEMICS**



University Interscholastic League



# Science

**DO NOT OPEN TEST  
UNTIL TOLD TO DO SO**

**UNIVERSITY INTERSCHOLASTIC LEAGUE  
2022-2023 A+ SCIENCE  
SPRING TEST**

1. Which of the following does not represent the meaning of an element?
- A. A stone made entirely of granite
  - B. A gum ball machine with different sized and colored gum balls
  - C. A package of shredded iceberg lettuce
  - D. A wall made of identical cinder blocks
2. Based on the chemical equation, how many different elements and compounds are represented?

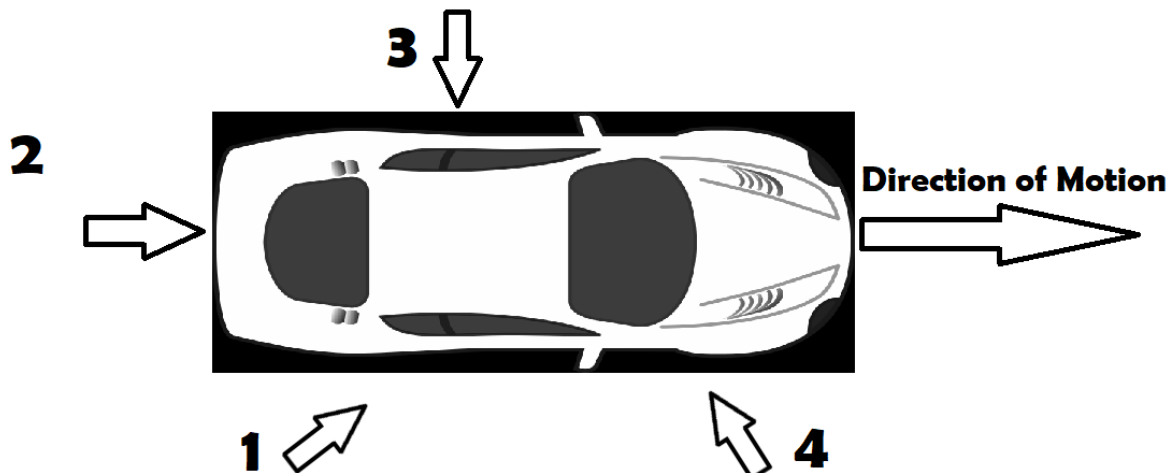


- A. Elements – 2; Compounds – 4
  - B. Elements – 4; Compounds – 3
  - C. Elements – 3; Compounds – 3
  - D. Elements – 2; Compounds – 2
3. What is an ecological model of the relationships that form a network of complex interactions among organisms in a community from producers to decomposers?
- A. Food web
  - B. Food chain
  - C. Ecosystem
  - D. Population
4. A neutral atom contains the following particles. What is its mass number?

Neutron	17
Electron	11
Proton	?

- A. 11                      B. 17                      C. 28                      D. 45
5. Most scientists believe that atomic interactions depend primarily on the arrangement of valence electrons. This is most supported by observations of similar reactions of elements located –
- A. With similar number of protons
  - B. With similar mass numbers
  - C. In a period on the periodic table of elements
  - D. In a group on the periodic table of elements

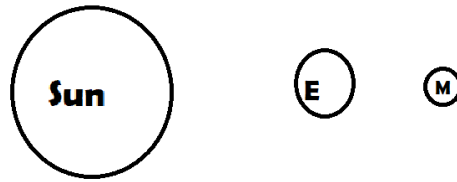
6. A teacher puts two tablets into a liquid in a cup. The teacher stirs the liquid with the tablet submerged using a stirring rod and it begins to bubble. Which is less dense than the liquid in the cup?
- A. Tablet  
B. Glass  
C. Spoon  
D. Bubbles
7. What property stays the same during both a physical and a chemical change?
- A. Density  
B. Color  
C. Mass  
D. Particle arrangement
8. A car is moving down the street as shown. Which force will only affect the speed of the car?



- A. 1                      B. 2                      C. 3                      D. 4
9. Which best describes the scenario below:  
An airplane taking off traveling at 275 km/hr
- A. Example of speed  
B. Example of velocity  
C. Example of speed and acceleration  
D. Example of velocity and acceleration
10. Which of the following describes a human activity that uses up non-renewable resources?
- A. Plowing topsoil and causing erosion  
B. Cooking on a gas grill  
C. Gathering fire wood for a camp fire  
D. Electricity from a hydroelectric dam
11. This is the process of transforming chemical energy into forms of usable energy by the organisms?
- A. Photosynthesis  
B. Homeostasis  
C. Cellular respiration  
D. Excretion



12. Using the diagram, what time would there be a high tide?



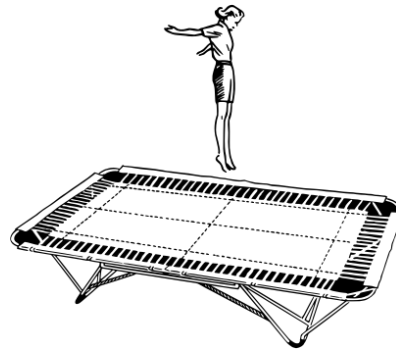
- A. 3 PM                      B. 6 PM                      C. 9 PM                      D. 12 PM

13. A marble, golf ball, and tennis ball all fall off a table towards the ground at the same time. The objects all hit the ground at the same time because each has the same –

- A. Acceleration  
B. Inertia  
C. Weight  
D. Size

14. When the springs are compressed on the trampoline an increase of \_ will occur.

- A. Chemical energy  
B. Kinetic energy  
C. Electrical energy  
D. Potential energy



15. Which event would most likely have the effect of impacting the world's climate by lowering the temperatures as well as plant growth rate slows down?

- A. Hurricane                      C. Tornado  
B. Large volcanic activity      D. Large landslides

16. Main sequence stars like our sun tend to appear in the yellow range of visible light. Older stars generally tend to appear red. Blue stars are considered young stars and tend to burn –

- A. Very hot                      C. Similar temperature to our sun  
B. Extremely cool              D. Forever

17. Who proposed the closed universe theory?

- A. Einstein                      C. Copernicus  
B. Friedman                  D. Ptolemy

18. Which of the following best explains why cold air displaces warm air?

- A. Convection  
B. Conduction  
C. Radiation

19. Students make a list of materials that are needed for humans to survive in space. Which item listed would account for the fact that space is a vacuum and can cause extreme temperatures?
- A. Solar panels  
B. Electric heater  
C. Rocket engines  
D. Water
20. Some mountain ranges, such as the Alps, increase in elevation because of –
- A. Seafloor spreading  
B. Earthquakes  
C. Motion of the tectonic plates  
D. Tsunamis
21. Oceanic and continental are two types of Earth’s –
- A. Core  
B. Elements  
C. Atmosphere  
D. Crust
22. In which major tectonic plate would you find Paris, France?
- A. Pacific  
B. Nazca  
C. Eurasian  
D. African
23. Students observe many different organisms living in a grassy field but they do not see any frogs. Which changes would most likely allow for frogs to live in this field?
- A. Landslide  
B. Diversion of a stream to flow through the field  
C. Grassfire  
D. Increase in predators
24. On a hot summer day, a person steps onto asphalt from the grass while barefooted. Why does the asphalt seem so much warmer?
- A. Asphalt has a lower specific heat  
B. Grass has a lower specific heat  
C. Asphalt has a higher specific heat  
D. Grass and asphalt have the same specific heat
25. A student made the following chart.

Group 1	Group 2
Mars	Neptune
Venus	Uranus
Mercury	Jupiter

- How did the student most likely use to separate the sets of planets?
- A. With and without satellites  
B. With and without water  
C. With and without atmospheres  
D. Gas and terrestrial planets



26. The moon has about 1/6 the amount of gravitational force as Earth. If you can jump four meters on Earth, about how many meters can you jump on the moon using the same force?

- A. .24 m
- B. 2 m
- C. 24 m
- D. 12 m

27. Using the following information identify the insect.



1. Does the insect have wings? Remember most adult insects have 2 pairs of wings, but they're not always visible.	a. Yes	go to step 2
	b. No	Order Hemiptera
2. Does the insect have parallel wings?	a. Yes	go to step 3
	b. No	go to step 4
3. Does the insect have a parallel line down the back that divides the wings?	a. Yes	Order Coleoptera
	b. No	Order Orthoptera
4. Does the insect have 4 total wings?	a. Yes	go to step 5
	b. No	Order Diptera
5. Does the insect have long antennae?	a. Yes	go to step 6
	b. No	Order Odonata
6. Does the insect have a small body with large fan-shaped wings?	a. Yes	Order Lepidoptera
	b. No	Order Hymenoptera


- A. Order Hemiptera
- B. Order Hymenoptera

- C. Order Lepidoptera
- D. Order Orthoptera

28. Which relationship is most like a tick and dog?

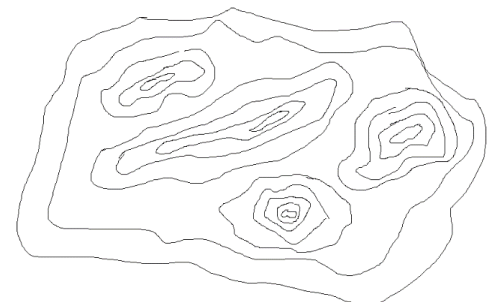
- A. *Ceratocystis fagacearum* & oak trees
- B. Hummingbird & flowers

- C. Fish & bear
- D. Goby fish & shrimp

29. Domains bacteria and eukarya are distinguished by:
- All bacteria are single celled and all eukarya are multicellular
  - Bacteria get nutrients from absorption and eukarya by photosynthesis
  - Only bacteria can grow and reproduce
  - Only eukarya have genetic material
30. Which pair best matches the pair of phrases below?  
 children on a playground – park complex
- Population – ecosystem
  - Abiotic – biotic
  - Hypothesis – conclusion
  - Igneous – sedimentary
31. A class was studying human body systems. Students learned about a system that secretes hormones and regulates bodily processes. This is most likely the \_\_\_\_ system.
- Circulatory
  - Endocrine
  - Digestive
  - Excretory
32. Which of these can be found in a plant cell but not in an animal cell?
- Chromosome
  - Mitochondria
  - Ribosomes
  - Thylakoid
33. Two materials are mixed together in a plastic bag in the hopes of producing carbon dioxide. Which is the best evidence showing a chemical reaction has taken place to produce carbon dioxide?
- A color change
  - A precipitate is formed
  - Expansion of the sealed bag
  - An endothermic reaction occurred
34. A ball is tossed as shown.
- What force(s) cause this path?
- Inertia
  - Adhesion and cohesion
  - Forward speed and gravity
  - Spring forces
- 
35. Which of the following domains lack a nucleus but has a cell wall?
- Eukarya
  - Bacteria
  - Archaea
  - Bacteria and Archaea
36. In a plant, this describes growth in response to contact with another solid object.
- Hydrotropism
  - Thigmotropism
  - Phototropism
  - Heliotropism

37. Which of the following is not a result of heredity?
- A person only wearing designer clothes
  - A child that has blue eyes like his father
  - A child that has cystic fibrosis just like a grandparent
  - Triplets that all have red hair like their mother
38. Which system of the human body has a similar function to that of some cilia?
- Circulatory
  - Skeletal
  - Muscular
  - Endocrine
39. Using selective breeding, a new type of grain was produced for crop production in areas where the summer growing season is short. Which trait would be most useful for these farmers that will be planting this new grain?
- Extra-large seed size
  - Fast growing rate
  - Long stem length
  - Shallow root system
40. Which of the following is not considered a major benefit of recycling?
- Reducing consumption
  - Saves energy
  - Keeps materials out of landfills
41. Which would result in the most diverse offspring?
- A Self-pollinating flower
  - Butterflies pollinating from one flower to another
  - Planting cuttings from an African violet
  - Paramecia reproducing asexually
42. Which is not a reason why biodiversity is important?
- Biodiversity loss decreases the water quality
  - Species act as natural pest control
  - Too many species in an ecosystem
  - Promotes healthier maintained ecosystems
43. When it is summer in the Northern hemisphere, the Southern hemisphere would be experiencing?
- Winter
  - Spring
  - Summer
  - Fall
44. How many peaks are illustrated on this map?

- 1
- 2
- 3
- 4



45. Changes in the thickness of polar ice caps likely indicate changes in –
- Decreased solar flares
  - Earth's climate
  - Biodiversity of the artic
  - Increased fault activity
46. After a flood, scientists studying aquatic plants showed a decline in the rate of photosynthesis. Increases in the sediment lowers the amount of light in the water. Why would a decline in this rate lead to a decrease in the aquatic plant population?
- There is less water for absorption
  - There is less soil for nutrients
  - There is less radiant energy provided by the sun
  - There is less energy for reproduction
47. Which of the following is only part of a comparative investigation?
- Observations
  - Procedures
  - Variables
  - Data, graphs, and analysis
48. What is the length of the line above the ruler?



- 98 cm
  - 5.8 cm
  - 9.8 cm
  - 58 cm
49. Which of the following is not a scientific model?
- A computer program that shows the formation of mountain ranges
  - A computer program used to predict the weather
  - A dinosaur skeleton in a museum
  - A data table used to show information from a lab
50. This individual is credited with creating the Harvard Classification Scheme to classify stars based on their temperatures. This individual also catalogued 230,000 stars and discovered three hundred of these stars.
- Russell
  - Cannon
  - Hertzsprung
  - Galileo



**UIL A+ SCIENCE CONTEST  
SPRING TEST  
2022-2023  
ANSWER KEY**

1. B	18. A	35. D
2. C	19. B	36. B
3. A	20. C	37. A
4. C	21. D	38. C
5. D	22. C	39. B
6. D	23. B	40. A
7. C	24. A	41. B
8. B	25. D	42. C
9. A	26. C	43. A
10. B	27. C	44. D
11. C	28. A	45. B
12. D	29. B	46. D
13. A	30. A	47. C
14. D	31. B	48. B
15. B	32. D	49. D
16. A	33. C	50. B
17. B	34. C	

CONTESTANT NUMBER:

**FOR GRADER USE ONLY**

Score Test Below:

\_\_\_\_\_ Initials \_\_\_\_\_

\_\_\_\_\_ Initials \_\_\_\_\_

Papers contending to place:

\_\_\_\_\_ Initials \_\_\_\_\_



**University Interscholastic League  
A+ Social Studies Contest • Answer Sheet**

*Write your contestant number in the upper right corner, and circle your grade below.*

Circle Grade Level:      5      6      7      8

- |     |   |   |   |   |     |   |   |   |   |
|-----|---|---|---|---|-----|---|---|---|---|
| 1.  | A | B | C | D | 21. | A | B | C | D |
| 2.  | A | B | C | D | 22. | A | B | C | D |
| 3.  | A | B | C | D | 23. | A | B | C | D |
| 4.  | A | B | C | D | 24. | A | B | C | D |
| 5.  | A | B | C | D | 25. | A | B | C | D |
| 6.  | A | B | C | D | 26. | A | B | C | D |
| 7.  | A | B | C | D | 27. | A | B | C | D |
| 8.  | A | B | C | D | 28. | A | B | C | D |
| 9.  | A | B | C | D | 29. | A | B | C | D |
| 10. | A | B | C | D | 30. | A | B | C | D |
| 11. | A | B | C | D | 31. | A | B | C | D |
| 12. | A | B | C | D | 32. | A | B | C | D |
| 13. | A | B | C | D | 33. | A | B | C | D |
| 14. | A | B | C | D | 34. | A | B | C | D |
| 15. | A | B | C | D | 35. | A | B | C | D |
| 16. | A | B | C | D | 36. | A | B | C | D |
| 17. | A | B | C | D | 37. | A | B | C | D |
| 18. | A | B | C | D | 38. | A | B | C | D |
| 19. | A | B | C | D | 39. | A | B | C | D |
| 20. | A | B | C | D | 40. | A | B | C | D |

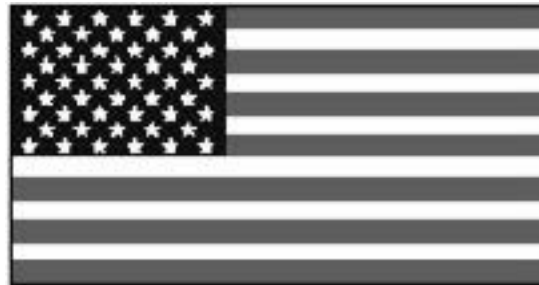


**INVITATIONAL 2022-2023**

**A+ ACADEMICS**



University Interscholastic League

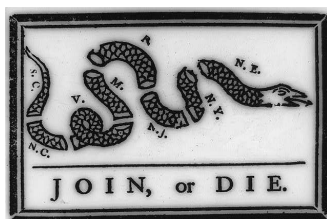


# Social Studies

grades 5 & 6

**DO NOT OPEN TEST  
UNTIL TOLD TO DO SO**

# UNIVERSITY INTERSCHOLASTIC LEAGUE 2022-23 A+ SOCIAL STUDIES INVITATIONAL – GRADES 5-6



1. Who created this cartoon urging colonies to unite during the French and Indian War?
  - a. John Peter Zenger
  - b. William Dawes
  - c. Benjamin Franklin
  - d. John Jay
  
2. How did the Treaty of Paris in 1763 change the map of North America?
  - a. Britain took over all the lands claimed by the Dutch
  - b. France received lands claimed by the Native Americans
  - c. Spain gained control of land north of the Rio Grande River
  - d. Britain took over most of New France and Spain gained control of French lands west of the Mississippi
  
3. Where did the Continental Congress meet?
  - a. New York
  - b. Philadelphia
  - c. Boston
  - d. New Orleans

---

**Dec. 1776**  
**Trenton captured**

**Oct. 1777**  
**?**

**1781**  
**Americans defeat**  
**British at Yorktown**

4. What event occurred on this date?
  - a. Battle of Saratoga
  - b. Battle of Savannah
  - c. Battle of New Orleans
  - d. Battle of King's Mountain
  
5. Why was Washington's victory at Trenton important for the Americans?
  - a. Seized badly needed guns and ammunition
  - b. Made many Americans more hopeful about winning the war
  - c. Fewer men volunteered to fight
  - d. An alliance was made with Spain
  
6. Which colonial leader was known for these actions?
  - **Defended British soldiers at Boston Massacre**
  - **Opposed British taxes and did not like having British soldiers in Boston**
  - **Patriot leader during the American Revolution**
  - a. Thomas Paine
  - b. Edward Garrick
  - c. John Adams
  - d. Hugh White

7. Who gave his men this last-second advice as British soldiers marched on the Patriots at Breed's Hill?

***"Don't fire until you see the whites of their eyes."***

- a. William Prescott
- b. James Madison
- c. Francis Marion
- d. Samuel Adams

8. Which Patriot group worked to oppose British rule before the American Revolution?

- a. Rough Riders
- b. Exodusters
- c. Sodbusters
- d. Sons of Liberty

9. What is defined as a form of government in which a person rules for life or until they abdicate?

- a. Monarchy
- b. Parliament
- c. Theocracy
- d. Feudalism

10. The \_\_\_\_\_ stated that the Pilgrims' government would make "just and equal laws... for the general good of the colony."

- a. Rhode Island Regulations
- b. Boston Charter
- c. Mayflower Compact
- d. Fundamental Orders of Connecticut

11. When was the House of Burgesses created in Virginia?

- a. 1776
- b. 1619
- c. 1845
- d. 1863

12. Which branch of government carries out a law?

- a. Legislative
- b. Religious
- c. Judicial
- d. Executive

13. Who decides the meaning of a law?

- a. President
- b. Courts
- c. Congress
- d. Church

14. Which colonial job does not exist or is rare today?

- a. Fisherman
- b. Surveyor
- c. Merchant
- d. Cooper

15. Who ran mills where colonists could grind corn and wheat into flour?

- a. Miller
- b. Dressmaker
- c. Printer
- d. Blacksmith

16. What title finishes the chart on economic systems?

?

**Gives consumers a variety from which to choose**

- a. Socialism
- b. Communism

**Gives consumers certain rights**

**Encourages inventors**

- c. Free enterprise
- d. Aristocracy

**People can become entrepreneurs**

17. When was *The Causes and Necessity of Taking Up Arms* adopted?
- a. March 2, 1836
  - b. September 5, 1682
  - c. April 21, 1836
  - d. July 6, 1775
18. Which action was NOT a cause of unrest between the colonists and Great Britain?
- a. Give and grant our money without our consent
  - b. Gave each colonist a league of land
  - c. Passed statutes for extending the jurisdiction of courts of the Admiralty and Vice Admiralty
  - d. Deprived privilege of trial by jury
19. Where did the House of Lords and Commons in their February address state that a rebellion existed?
- a. Virginia
  - b. Georgia
  - c. Massachusetts Bay
  - d. Rhode Island
20. What is the best definition for unalienable rights?

***“We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness” Declaration of Independence***

- a. That which cannot be given away or taken away
  - b. A statement declaring that something is true
  - c. To call together
  - d. A negative opinion that is not based on fact
21. According to the Declaration of Independence, who has the right to alter or abolish a government when it becomes destructive of these ends?
- a. Banks
  - b. The Church
  - c. Industry
  - d. The people
22. Why did Paul Revere make his famous ride?
- a. To ask for funds for the military
  - b. To negotiate a business deal
  - c. To spread the alarm that the British were marching
  - d. To see if anyone wanted to buy a horse
23. In the poem *Paul Revere’s Ride*, what British man-of-war was anchored in the bay?
- a. The Somerset
  - b. The Oklahoma
  - c. The Constitution
  - d. The Phoenix
24. Where was Revere on his famous ride when it was twelve by the village clock?
- a. Boston
  - b. Medford
  - c. Concord
  - d. New York

25. What is socialism?
- Economic system in which many businesses are owned and run by the government
  - Economy driven by forces including competition, supply and demand
  - Economic, social and political system, based on the teachings of Karl Marx, which advocated the elimination of private property
  - Form of government in which the king or queen governs with complete power
26. Which country has a communist economy?
- Canada
  - North Korea
  - France
  - Germany
27. What is a benefit for workers in the free enterprise system?
- Government decides what crops are grown
  - Workers do the same work for generations
  - Government regulates the prices charged for goods
  - Workers can keep profits they make
28. Agriculture is \_\_\_\_\_.
- Selling in large quantities at low prices to be sold by others
  - The sale of goods in small amounts directly to customers
  - The raising of crops and farm animals
  - To make or process something by machinery
29. What is an example of a service industry?
- General Mills
  - Education
  - Macy's
  - Hay farm in Sulphur Springs
30. \_\_\_\_\_ is an example of an unlimited government.
- Democracy
  - Common law
  - Constitutional monarchy
  - Dictatorship
31. What is the best definition for a limited government?
- Type of government where, through law, some control is placed on leadership's power
  - Government in which leaders rule without any restrictions
  - Social class based on a person's ancestry
  - Government that has a strong control over the economy and society as a whole
32. How are economic systems different?
- Landforms influence its climate
  - Way languages are spoken
  - How goods are produced
  - Rules that guide its people's behavior
33. Where does the United States government, economic system and social system have their roots?
- Asia
  - Africa
  - Europe
  - South America
34. Why is education different in countries around the world?
- Difference in cultures
  - Weather
  - How goods are produced
  - Landforms

35. What problem of early Texas colonists replaces the question mark?

### Problems of Early Texas Colonists

?

**Religious differences**

**Slavery**

- a. Construction of a transcontinental railroad
- b. Language
- c. High cost of gas
- d. Boundary disputes with the United States

36. Why did the Texas colonists that met at the Convention of 1836 decide to declare their independence from Mexico?

- a. Could get better trade deals from the United States
- b. Military alliance with Great Britain and France
- c. United States asked them to join
- d. Santa Anna's ongoing attacks made it clear that Texans must fight him in order to gain their independence from Mexico

37. What was NOT a challenge that the new Republic of Texas faced?

- a. Permanent School Fund
- b. Protection from attacks
- c. Debt
- d. Issue of statehood

38. Why was Santa Anna determined to take back the Alamo?

- a. Contained large deposits of minerals
- b. It was a historic church
- c. Cos had raised a white flag above the Alamo months before as a signal of surrender
- d. Large numbers of arms were stored in the facility

39. Which delegate to the Convention of 1836 earned fame as the author of the Texas Declaration of Independence?

- a. Richard Ellis
- b. George Childress
- c. John S. Roberts
- d. Sterling C. Robertson

40. Who led citizens in Victoria in refusing to give up their cannon to Mexican forces?

- a. John Moore
- b. Henry Millard
- c. George Hockley
- d. Placido Benavides

**UNIVERSITY INTERSCHOLASTIC LEAGUE  
2022-23 A+ SOCIAL STUDIES  
INVITATIONAL TEST —GRADES 5 & 6**

**Answer Key**

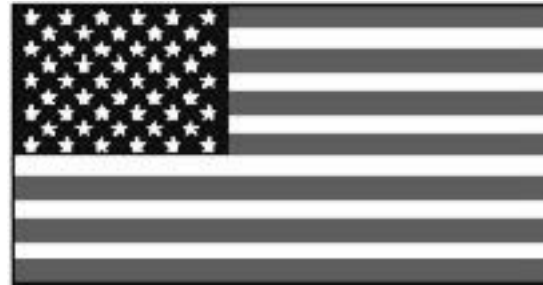
- |       |       |
|-------|-------|
| 1. C  | 21. D |
| 2. D  | 22. C |
| 3. B  | 23. A |
| 4. A  | 24. B |
| 5. B  | 25. A |
| 6. C  | 26. B |
| 7. A  | 27. D |
| 8. D  | 28. C |
| 9. A  | 29. B |
| 10. C | 30. D |
| 11. B | 31. A |
| 12. D | 32. C |
| 13. B | 33. C |
| 14. D | 34. A |
| 15. A | 35. B |
| 16. C | 36. D |
| 17. D | 37. A |
| 18. B | 38. C |
| 19. C | 39. B |
| 20. A | 40. D |

**FALL/WINTER DISTRICT 2022-2023**

**A+ ACADEMICS**



University Interscholastic League



# Social Studies

grades 5 & 6

**DO NOT OPEN TEST  
UNTIL TOLD TO DO SO**



**UNIVERSITY INTERSCHOLASTIC LEAGUE  
2022-23 A+ SOCIAL STUDIES  
FALL/WINTER TEST – GRADES 5-6**

1. Why were British troops trying to capture Fort Duquesne?
  - a. It was located on the highest peak in the colonies
  - b. The French fort was at a strategic spot where the rivers joined
  - c. It was the least guarded French fort
  - d. Served as the capital of New France
  
2. How did colonists respond to the Stamp Act?
  - a. Created an army
  - b. Wrote letters to Spain for help
  - c. Protests led to the Stamp Act Congress that helped unite the colonies
  - d. Bought items taxed under the Stamp Act from Mexico
  
3. Who gave his men this order at Lexington?

***“Stand your ground. Don’t fire unless fired upon, but if they mean to have a war, let it begin here.”***

- a. John Parker
- b. Thomas Payne
- c. William Diamond
- d. Henry Knox



4. Where did Washington’s army set up camp for the winter of 1777?
  - a. Trenton
  - b. Richmond
  - c. Concord
  - d. Valley Forge

---

**April, 1775**  
**Lexington**

**October, 1777**  
**Saratoga**

**1781**  
**?**

5. What major battle of the American Revolution finishes the timeline?
- a. New Orleans
  - b. Camden
  - c. Yorktown
  - d. Brandywine
6. Who organized the Sons of Liberty?
- a. Edward Garrick
  - b. Samuel Adams
  - c. Hugh White
  - d. Thomas Gage
7. Which of these actions finishes this list on Benjamin Franklin?
- **Sent to France to seek assistance for the Patriots**
  - **?**
  - **Writer, scientist and inventor**
- a. Defended British soldiers at Boston Massacre
  - b. Lead colonists at the Battle of Bunker Hill
  - c. President of the Second Continental Congress
  - d. Served on the committee to draft the Declaration of Independence
8. Who served as President of the Constitutional Convention?
- a. George Washington
  - b. Thomas Jefferson
  - c. John Adams
  - d. James Madison
9. Which government did the early colonists use as an example for forming their own governments?
- a. France
  - b. Netherlands
  - c. Spain
  - d. England
10. When was the Fundamental Orders of Connecticut established by the Puritans?
- a. 1607
  - b. 1639
  - c. 1776
  - d. 1865
11. What plan of government did the Pilgrims write for their colony?
- a. Mayflower Compact
  - b. Albany Congress
  - c. New England Confederation
  - d. Rhode Island Religious Rules
12. Who heads the executive branch of the federal government?
- a. Chief Justice
  - b. Speaker of the House
  - c. President
  - d. Pope

13. What branch of the federal government passes laws?  
a. Legislative  
b. Judicial  
c. Executive  
d. Religious
14. A \_\_\_\_\_ made barrels from wood and iron.  
a. Printer  
b. Cooper  
c. Shoemaker  
d. Blacksmith
15. Who makes maps and marks boundary lines?  
a. Miller  
b. Merchant  
c. Surveyor  
d. Fisherman
16. What is the type of economic system in which people are free to start their own businesses and own their own property?  
a. Socialism  
b. Communism  
c. Feudalism  
d. Capitalism
17. Who signed the document, The Causes and Necessity of Taking Up Arms, as President of the Congress?  
a. Sam Houston  
b. Nathaniel Greene  
c. John Hancock  
d. Ethan Allen
18. When did colonists meet in Philadelphia to offer a petition to the King and address their fellow subjects of Great Britain?  
a. March 2, 1836  
b. April 12, 1835  
c. July 4, 1776  
d. September 5, 1774
19. Where were eight of the inhabitants murdered and many others wounded by an unprovoked assault by a large detachment of Gage's army on April 19<sup>th</sup>?  
a. Lexington  
b. Ticonderoga  
c. Charles-Town  
d. Vincennes
20. Which title best completes this list?

?

**Refused his assent to laws**

**Dissolved Representative Houses repeatedly**

**Cut off our trade with all parts of the world**

**Kept among us, in times of peace, Standing Armies without the consent of our legislatures**

- a. Benefits received from France  
b. Repeated abuses by the King of England  
c. Assistance given from Spain  
d. Abuses by the Emperor of Mexico

21. What document contains this quote?

***“We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness.”***

- a. Constitution of the United States
- b. Magna Carta
- c. Declaration of Independence
- d. English Bill of Rights

22. Who is the author of the poem, Paul Revere’s Ride?

- a. Henry David Thoreau
- b. Maya Angelou
- c. Robert Frost
- d. Henry Wadsworth Longfellow

23. How was Revere to know if the British were moving by land?

- a. Two lanterns
- b. One lantern
- c. One gun shot
- d. Messenger

24. Where was Revere on his ride when it was two on the village clock?

- a. Concord
- b. Germantown
- c. Medford
- d. Princeton

25. \_\_\_\_\_ is a type of economy where the government makes all the decisions.

- a. Traditional
- b. Command
- c. Market
- d. Mixed

26. Which country is the best example of a socialist economy?

- a. Germany
- b. Canada
- c. Myanmar
- d. Brazil

27. What economic system is sometimes called a “free enterprise system”?

- a. Market
- b. Mixed
- c. Command
- d. Traditional

28. Manufacturing is \_\_\_\_\_.

- a. The raising of crops and farm animals
- b. Selling in large quantities at low prices to be sold by others
- c. The sale of goods in small amounts directly to customers
- d. To make or process something by machinery

29. What is an example of a wholesale industry?

- a. General Mills
- b. Macy’s
- c. Dairy farm in Wisconsin
- d. Health care

30. \_\_\_\_\_ is a form of limited government.
- a. Dictatorship
  - b. Absolute monarchy
  - c. Theocracy
  - d. Democracy
31. Which country is best known for its constitutional monarchy form of government?
- a. Eritrea
  - b. Saudi Arabia
  - c. Great Britain
  - d. Vatican
32. What is the best definition of a government?
- a. Different ways people and nations go about meeting their daily needs
  - b. Political system by which a country is administered and regulated
  - c. Careful use of resources so they are not wasted
  - d. When a group of people adopts another's cultural traits
33. What is the best definition for religion?
- a. How goods are produced
  - b. Belief in or worship of God, or Gods
  - c. A large farm on which large herds of cattle, sheep and horses are raised
  - d. The condition of the air or atmosphere at a particular time and place
34. What is a benefit of quality schools in the United States?
- a. Allows its coal mining to lead the world
  - b. Cottage industries lead the nation in the number of jobs
  - c. Helped the country to become a world leader in satellites, computers, health care and many other fields
  - d. Farming provides the greatest number of jobs
35. How did Texas become a part of the Mexican state of Coahuila and Texas?
- a. Under the Texas Constitution of 1836
  - b. Under the United States Constitution
  - c. Under the Spanish Constitution of 1824
  - d. Under the Mexican Constitution of 1824
36. What was the Runaway Scrape?
- a. During March 1836 people in Texas fled eastward toward the United States fearful for their lives
  - b. Certain rights that belong to all Texans
  - c. A system in which people have freedom in selling and buying
  - d. A wooden frame used by Native Americans to carry possessions from place to place
37. \_\_\_\_\_ was elected as the first president of the Republic of Texas.
- a. Sam Houston
  - b. T.J. Rusk
  - c. David G. Burnet
  - d. Hendrick Arnold

38. Why is the Battle of the Alamo important in Texas history?
- Texas lost large numbers of rifles and ammunition
  - Inspired Texans to win the war
  - Major battle with Great Britain
  - Increased the debt with the United States
39. Which important figure in Texas history was known for these actions?
- Alcalde of San Antonio**
  - One of the few Tejanos inside the Alamo when the siege began**
  - He and his men became the only Tejanos to take part in the Battle of San Jacinto**
- Marquis de San Miguel de Aguayo
  - Porfirio Diaz
  - Juan Seguin
  - Joseph Sanchez
40. Where did this battle cry wake the napping Mexican army on April 21, 1836?

***“Remember the Alamo! Remember Goliad!”***

- Battle at San Antonio
- Battle of Gonzales
- Battle of Victoria
- Battle of San Jacinto

**UNIVERSITY INTERSCHOLASTIC LEAGUE  
2022-23 A+ SOCIAL STUDIES  
FALL/WINTER TEST —GRADES 5 & 6**

**Answer Key**

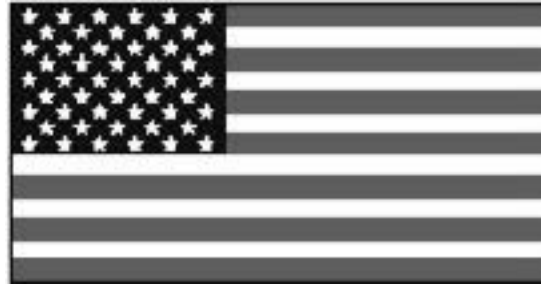
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|-------|-------|
| 1. B  | 21. C |
| 2. C  | 22. D |
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| 4. D  | 24. A |
| 5. C  | 25. B |
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| 7. D  | 27. A |
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| 9. D  | 29. A |
| 10. B | 30. D |
| 11. A | 31. C |
| 12. C | 32. B |
| 13. A | 33. B |
| 14. B | 34. C |
| 15. C | 35. D |
| 16. D | 36. A |
| 17. C | 37. A |
| 18. D | 38. B |
| 19. A | 39. C |
| 20. B | 40. D |

**SPRING DISTRICT 2022-2023**

**A+ ACADEMICS**



University Interscholastic League



# Social Studies

grades 5 & 6

**DO NOT OPEN TEST  
UNTIL TOLD TO DO SO**



**UNIVERSITY INTERSCHOLASTIC LEAGUE  
2022-23 A+ SOCIAL STUDIES  
SPRING DISTRICT TEST – GRADES 5-6**

1. Why was the war between France and Britain called the French and Indian War in the Thirteen Colonies?
  - a. Native Americans tried to force French forces from their land
  - b. Because British forces fought against the French and their American Indian allies
  - c. Great Britain relocated Native Americans to the backcountry
  - d. Great Britain and France entered an alliance against the Native Americans
  
2. How did colonists react to the passage of the Tea Act?
  - a. Bought tea from China at a lower price
  - b. Colonists increased import taxes on tea
  - c. Sons of Liberty dumped tea into the harbor in what came to be known as the Boston Tea Party
  - d. Imprisoned British tax collectors
  
3. Why did the slogan “**No Taxation without Representation**” become popular in the colonies?
  - a. Colonists were denied promised representation
  - b. Were deprived the privilege of trial by jury
  - c. Each colonist had been given forty acres and a mule
  - d. Britain failed to establish a school system
  
4. Who was a victim of the Boston Massacre?
  - a. John Adams
  - b. Samuel Prescott
  - c. William Diamond
  - d. Crispus Attucks
  
5. Where was the shot fired that came to be known as “**the shot heard round the world**”?
  - a. Gonzales
  - b. Savannah
  - c. Lexington
  - d. Valley Forge



6. What battle fought on June 17, 1775 was a costly victory for British troops over the Patriots?
  - a. Battle of Bunker Hill
  - b. Battle of New Orleans
  - c. Battle of Concord
  - d. Battle of Monmouth Courthouse

---

Dec, 1776  
Trenton

Oct, 1777  
?

1781  
Yorktown

7. Which battle that is often called the turning point of the American Revolution finishes the timeline?
- a. Battle of Fort Ticonderoga
  - b. Battle of Saratoga
  - c. Battle of Trenton
  - d. Battle at Valley Forge

8. Who is credited with this quote after refusing to surrender his ship to the British?

***“I have not yet begun to fight!”***

- a. Joseph Martin
- b. Thaddeus Kosciusko
- c. George Rogers Clark
- d. John Paul Jones

9. Where was Washington preparing to attack the British when he saw that they could be trapped at Yorktown?

- a. Boston
- b. Princeton
- c. Philadelphia
- d. New York City

10. Which action finishes this list of accomplishments for George Washington?

- **Led the Continental Army during the American Revolution**
- ?
- **Became the first President of the United States**

- a. Wrote the Declaration of Independence
- b. Defended British soldiers accused of murder at Boston
- c. Served as president of the Constitutional Convention
- d. President of Second Continental Congress

11. What was the first representative government in the colonies?

- a. House of Burgesses
- b. Georgia House
- c. New York Assembly
- d. North Carolina Town Hall

12. The \_\_\_\_\_ was a set of laws that were established in 1639 by a Puritan congregation and expanded the idea of representative government.

- a. Mayflower Compact
- b. Fundamental Orders of Connecticut
- c. Rhode Island Religious Order
- d. Massachusetts Rights

13. Which branch of the national government decides the meaning of laws?

- a. Judicial
- b. Legislative
- c. Executive
- d. Religious

14. Who in the national government passes laws?

- a. President
- b. Congress
- c. Supreme Court
- d. Pope

15. What colonial profession made shoes from leather and wood?
- a. Cooper
  - b. Merchant
  - c. Printer
  - d. Shoemaker
16. How did inventors like Thomas Edison benefit from the free enterprise system?
- a. Government controlled the price he could charge
  - b. The government controlled the number of goods that could be sold
  - c. He knew that if he made a good invention, people might choose his product to buy
  - d. Production of goods would be controlled by the government
17. Who was an author of the document, **The Causes and Necessity of Taking Up Arms**?
- a. Benjamin Franklin
  - b. Thomas Jefferson
  - c. John Hancock
  - d. George Childress
18. Where did the Representatives of the United Colonies of North America meet in General Congress to adopt **The Causes and Necessity of Taking Up Arms**?
- a. Savannah
  - b. New York
  - c. New Orleans
  - d. Philadelphia
19. What was the reason given for colonists taking up arms against the British in **The Causes and Necessity of Taking Up Arms**?
- a. For glory
  - b. For conquest of land and people
  - c. They were people attacked by unprovoked enemies
  - d. By agreement
20. When was the **Declaration of Independence** adopted?
- a. July 4, 1776
  - b. April 6, 1836
  - c. September 5, 1776
  - d. January 1, 1778
21. Who did NOT sign the **Declaration of Independence**?
- a. John Adams
  - b. Thomas Jefferson
  - c. George Washington
  - d. Benjamin Franklin
22. When was the famous ride of Paul Revere?
- a. September 15, 1774
  - b. April 18, 1775
  - c. October 17, 1777
  - d. May 10, 1775



23. Where was Revere to look for the signal that he was to make his famous ride?
- a. Boston Public Garden
  - b. Fenway Park
  - c. Faneuil Hall
  - d. North Church

24. How was Revere's friend to obtain information about the British troop movement?
- He wandered through alleys and streets and watched until the soldiers' marched
  - Met with a British soldier
  - Chain of messengers
  - In a newspaper article
25. A \_\_\_\_\_ is an economy where individuals determine for themselves what to produce, who will want it, how much to produce and how much to charge.
- Traditional economy
  - Market economy
  - Mixed economy
  - Command economy
26. What is communism?
- Form of government in which one individual ruled as both religious leader and king
  - Economic system in which many businesses are owned and run by the government
  - Economic system that operates on free competition, in which people start and own businesses with limited government intervention
  - Economic, social and political system based on the teachings of Karl Marx, which advocated the elimination of private property
27. Which country is the best example of a free enterprise economy?
- United States
  - Laos
  - China
  - Vietnam
28. Wholesale is \_\_\_\_\_.
- To make or process something by machinery
  - The sale of goods in small amounts directly to customers
  - Sell in large quantities at low prices to be sold by others
  - The raising of crops and farm animals
29. These businesses are examples of which type of industry?
- **Macy's**
  - **H E B**
  - **Barnes and Noble**
- Manufacturing
  - Agricultural
  - Retail
  - Wholesale
30. What is a service industry?
- Industry that provides services to people rather than producing goods
  - Home or village based industry in which family members supply their own equipment to make goods
  - Industry that produces goods such as machinery, mining equipment and steel
  - Industry that produces computers and other kinds of electronic equipment
31. An \_\_\_\_\_ is best defined as a government in which leaders rule without any restrictions.
- Democracy
  - Unlimited government
  - Imperialism
  - Limited government

32. What sets limits on how much power government officials have so that they cannot take advantage of the people?
- a. Literacy rate
  - b. Majority culture
  - c. Climate controls
  - d. Constitution
33. Monotheism is \_\_\_\_\_.
- a. Person who moves from place to place with herds of animals
  - b. Belief that there is only one God
  - c. Believing in more than one god
  - d. Usual, predictable pattern of weather in an area over a long period of time
34. What is an economic system?
- a. Political system by which a country is administered and regulated
  - b. Place of worship
  - c. Different ways people and nations go about meeting their needs
  - d. Ways languages are spoken
35. Who was arrested after a visit with government officials in Mexico City?
- a. Stephen F. Austin
  - b. Lorenzo de Zavala
  - c. Martin de Leon
  - d. Erasmo Seguin
36. Why did the Mexican government pass the Law of April 6?
- a. Unsuccessful business deals with Great Britain
  - b. Conflicts with France
  - c. Under direction of the Pope
  - d. Fear that the Texans might try to form their own government
37. What form of government did the new independent citizens of Texas create?
- a. Parliamentary
  - b. Monarchy
  - c. Communist
  - d. Republic
38. Who sent this plea for help when fighting began at the Alamo?

***“To the People of Texas & all Americans in the world. I call on you in the name of Liberty, of patriotism & everything dear to the American character, to come to our aid...”***

- a. Colonel James Fannin
  - b. David Crockett
  - c. William B. Travis
  - d. James Bowie
39. What is Enrique Esparza known for in Texas history?
- a. Witness of the Battle of the Alamo
  - b. Second in command of the Mexican army and carried out Santa Anna’s orders to withdraw the Mexican forces from Texas
  - c. One of only two native Texans among the fifty-nine men who signed the Texas Declaration of Independence
  - d. Led citizens in Victoria in refusing to give up their cannon to Mexican forces
40. How long did the Battle of San Jacinto last?
- a. One hour
  - b. 18 minutes
  - c. 30 minutes
  - d. 6 hours

**UNIVERSITY INTERSCHOLASTIC LEAGUE  
2022-23 A+ SOCIAL STUDIES  
SPRING DISTRICT TEST —GRADES 5 & 6**

**Answer Key**

- |       |       |
|-------|-------|
| 1. B  | 21. C |
| 2. C  | 22. B |
| 3. A  | 23. D |
| 4. D  | 24. A |
| 5. C  | 25. B |
| 6. A  | 26. D |
| 7. B  | 27. A |
| 8. D  | 28. C |
| 9. D  | 29. C |
| 10. C | 30. A |
| 11. A | 31. B |
| 12. B | 32. D |
| 13. A | 33. B |
| 14. B | 34. C |
| 15. D | 35. A |
| 16. C | 36. D |
| 17. B | 37. D |
| 18. D | 38. C |
| 19. C | 39. A |
| 20. A | 40. B |



# Storytelling

## EVALUATION SHEET

### INSTRUCTIONS

Please review the instructions for evaluating the performances of the storytelling contestants. The following criteria are of equal importance to evaluating contestants. Terminology used is only intended to help the judge identify criteria for determining a winner. Please make your comments using language understandable to the contestant. Students and instructors appreciate constructive narrative comments. Please do not confer with other judges before ranking students. Judges' decisions are an individual responsibility.

**Speaker Number** \_\_\_\_\_

**Speaker Name** \_\_\_\_\_

**Round**  Prelims

**Section** \_\_\_\_\_

Finals

Yes No **Did the contestant communicate effectively with the audience?**

Yes No **Did the contestant command attention?**

Yes No **Did the contestant tell the story with ease?**

Yes No **Did the contestant exhibit enthusiasm?**

Yes No **Did the contestant utilize facial expressions, vocal variety and characterization?**

Yes No **Did the contestant make good eye contact?**

Yes No **Did the contestant use good posture?**

Yes No **Did the contestant speak clearly?**

Yes No **Did the contestant use gestures effectively?**

### CONSTRUCTIVE COMMENTS FOR THE CONTESTANT:

*Judge's signature* \_\_\_\_\_



Storytelling Contest  
Invitational 2022-23

“Tracks at Coyote Creek”  
Major Elements of the Plot

Grades 2 and 3

**Directions to Contest Directors:** Give a copy of this sheet to each judge before the contest begins.

**Directions to Judges:** Each speaker must include at least one of the following elements from the story in his or her presentation. Words may vary. It is up to the judge to decide if the speaker has included one of the elements.

1. The narrator describes a mystery that happened at their summer camp.
2. While at camp having fun with other campers, the narrator’s friend Taylor discovers a set of big tracks near their campsite. The tracks are like big bird tracks with three toes.
3. The camp counselor assumes someone is pulling a prank, but the campers insist the tracks must be real. The story of the tracks becomes a big story around the summer camp. Then more tracks begin to appear around camp, as well as some scratches on trees.
4. The campers think it might be a bear, but there are no bears at Coyote Creek. The tracks eventually stop appearing.
5. The narrator then explains that it was a prank. The narrator put together special feet to make the tracks and hid the feet from their fellow campers. The narrator hopes no one spoils the mystery and tells their secret.





## Storytelling Contest

Invitational 2022-23

### "Tracks at Coyote Creek"

Grades 2 and 3

by Sherri Maret

Did you hear what happened at Coyote Creek Camp this summer?  
No? Well I'll tell you.

I went to camp, and it wasn't at all like last summer. Why? Because there was a big mystery there.

My camper friends and I did the usual swimming, canoeing, archery, and that kind of thing. We did crafts and were having so much fun. We would build a fire and roast hot dogs and marshmallows. You know, the usual stuff.

That all changed when we woke up one morning. We were talking while laying in our sleeping bags in our big tent when Taylor, my friend, left the tent and then came running back.

"You need to see this!" Taylor yelled.

We all got dressed and went outside. There in the dirt were big tracks. These were like a foot long. They were giant!

“What made these?” Terry asked.

“Looks like giant bird tracks,” Ky said.

The tracks were shaped with three toes that came to a point out front and a heel of some sort in the back.

“Looks like a dinosaur track to me,” I said. Everyone laughed.

“Yeah right. Let’s get the counselor,” someone else said. So that’s what we did.

“Okay, somebody is having some fun. Who made the tracks?” asked our counselor.

We all looked at each other.

“Not me!” Terry said.

“I didn’t do it either,” said Ky.

“Who could have done this?” I asked.

We all talked for a while and the counselor just looked at us and back at the tracks. “Come on. It’s a good prank but one of you must have made these.” Again, no one confessed to making the tracks.

“So, you think it’s a prank?” asked Ky.

Taylor said, “Of course! There is no animal that could make a track that big.”

We went to breakfast. This is where all the different groups met for breakfast and lunch. We made our dinner at our own campsite. The news of the mysterious tracks spread through Coyote Creek like a wildfire. Everyone wanted to see the tracks so that was a busy morning in our campsite.

Another counselor said, “I guess we now have a mystery at Coyote Creek!” Then all the counselors laughed.

The next morning there were more tracks. This time they were by the restroom and showers between our campsite and the one nearby. The tracks led into some weeds and some branches were broken.

“Look, there are giant scratch marks on the tree here,” said one of the campers.

“Bears do that!” another camper exclaimed.

“Don’t worry. No bears in our area,” another counselor chimed in.

At breakfast, everyone was talking about the tracks and scratch marks.

The next morning there were tracks around the trash dumpsters. The tracks disappeared into the rocky hill behind the cabin where the camp leader lived. After that, there weren’t any more tracks found.

That didn’t stop everyone from talking about it.

It was fun to have a little excitement.

“So, are you wondering why I am telling you about this? Here’s why. I am moving so this will be my last time to go to summer camp at Coyote Creek. I wanted it to be amazing. I had the idea to make tracks and make camp a fun adventure. I asked my mom and dad to help me make the feet for tracks. We used some old shoes, plastic bottles, and lots and lots of duct tape. I hid them in my sleeping bag the whole time. Nobody but me, my family, and now you are the only ones to know this secret. Can you keep my secret? I hope so! Because I want the mystery of the tracks at Coyote Creek Camp to never be solved. So please don’t tell. You wouldn’t want to spoil it would you?”



Storytelling Contest  
Invitational 2022-23

“Oh NO! I’m Lost!”

Major Elements of the Plot

Grades 2 and 3

**Directions to Contest Directors:** Give a copy of this sheet to each judge before the contest begins.

**Directions to Judges:** Each speaker must include at least one of the following elements from the story in his or her presentation. Words may vary. It is up to the judge to decide if the speaker has included one of the elements.

1. The narrator is lost in the woods. They try yelling, but no one answers.
2. The narrator explains that while camping with their family, they walked off the trail to look at a turtle that turned out to just be a rock. Then they heard a squirrel in a tree, but it turned out to be a porcupine.
3. When they turned around to show their family the porcupine, the narrator discovered they were alone. They began to panic but decided to try and stay calm. They remember that they learned in their junior ranger class that you should “Stop. Sit down. Don’t panic.” when you get lost.
4. The narrator tries to follow the instructions but can’t find the whistle they were supposed to use if they got lost. Then they finally hear their parents calling their name.
5. The narrator is reunited with their family. They were only missing for 10 minutes.



## Storytelling Contest

Invitational 2022-23

“Oh NO! I'm Lost!”

Grades 2 and 3

by Sherri Maret

Oh NO! I'm lost!

Here I stand in the woods all by myself. How did this happen?

I start yelling.

HELLLOOOOOOOOOO! Can anyone hear me?

HELLLOOOOOOOOOO! MOM! DAD! UNCLE THEO! AUNT LULA!

No one heard me. Maybe only the squirrels and birds did. I spun around to see if I could figure out which way I had come.

I also thought about what everyone else might be doing. Why aren't they looking for me? Again, I thought about how I got into this mess.

When everyone stopped for snacks, I wanted to explore. Then I thought I saw a turtle. I walked off the trail to look. I love turtles. It wasn't a turtle. It was just a rock.

Then I heard a rustling up in a tree. I circled a bunch of trees. I guessed it was a squirrel making the noise, but I wanted to see it anyway. Finally, I saw something move in a tree above me. It was a porcupine! I didn't know porcupines climbed trees. I called for mom and dad. I wanted to show everyone.

I yelled. Nothing. Hmmmm. I yelled again. When no one yelled back, I realized I might have gone too far and nobody heard me.

I turned around to walk back to the trail. That's when I realized I didn't know which way the trail was.

My heart started pounding.

Take a deep breath. I need to stay calm. What should I do? Right, right. I need to remember what the park ranger said about this.

My family and I decided to do some camping this weekend. My aunt and uncle wanted to come too and they brought their families. It turned into a family reunion. Me and my cousins were having a great time together. Tonight is the last night we camp and then we go home.

On Friday my cousins and I went to a junior ranger program. It was so fun! We learned about animals here and things people should not do around wild animals. We also looked at different animal tracks and learned how to tell what made the tracks. It was great!

One of the lessons was about what to do when a person got lost. The ranger said that it doesn't matter if you are an old person or a kid, this is what you should do.

Stop. Sit down. Don't panic.

The ranger explained that if you try to find your way but aren't sure where you are, you could get farther away from the point that people last saw you. Stay put. The ranger asked us to repeat the rules.

Stop.

Sit down.

Don't panic.

It was hard not to panic.

The ranger handed out a whistle to all of us. He said that the sound of a whistle could be heard from far away. A person yelling wasn't as loud

and yelling takes a lot of your energy. With a whistle to blow, you wouldn't tire yourself out with yelling. I learned something new for sure.

Hmmmm. Where is my whistle? I check my pockets in my shorts. Nope. Pocket on my shirt. Nope. RATS! I think I left it in the car. That wasn't smart.

I climb a big rock so I can see as far as I can. There are a lot of trees so I can't see very far.

I wait. How long would it take for my parents to find me?

Then I heard my name being called. I yell.

I'm here! I'm here!

My dad comes running through the trees towards me.

My dad told me that he was at the front of the line on the trail and thought I was with my mom who was with my aunt at the tail end of the group. She thought I was with him.

I hear my mom yelling.

My dad yells back.

My mom hugs me and then the rest of the family comes too.

I tell them it was quite an adventure, but I followed what the ranger said to do in case you get lost.

My dad said that he didn't realize I was lost. They thought I was just taking my time following. I had been missing for ten minutes.

To me it felt like hours.

I hope this helps someone who hasn't been to a ranger program about being lost.

My advice is to not get lost in the first place.





Storytelling Contest  
Fall/Winter District 2022-23

“A Horse Story”  
Major Elements of the Plot

Grades 2 and 3

**Directions to Contest Directors:** Give a copy of this sheet to each judge before the contest begins.

**Directions to Judges:** Each speaker must include at least one of the following elements from the story in his or her presentation. Words may vary. It is up to the judge to decide if the speaker has included one of the elements.

1. The narrator is about to visit their grandfather, Pappy, who now owns two horses. The horses are Honey, a brown horse, and Cocoa, a black horse.
2. On their upcoming visit, the narrator is afraid of having to learn to ride the horses, despite reading books about horses and playing with horse toys.
3. The narrator has a phone call with Pappy to discuss the horses and the upcoming visit. The narrator plans to find creative ways to avoid having to learn to ride.
4. When the narrator arrives, Pappy is very excited to teach the narrator to ride. Pappy introduces the narrator to his neighbor, Layla, a girl around the same age as the narrator who is already riding horses.
5. Layla and Pappy teach the narrator to ride Honey, and the narrator learns to enjoy riding. Pappy makes a joke about teaching the narrator to learn to horse jump.



## Storytelling Contest

Fall/Winter District 2022-23

### “A Horse Story”

Grades 2 and 3

by Sherri Maret

My grandfather moved to the country during the summer. We are going for a visit next weekend, and I am a little nervous.

He has horses. Two of them. He sent us some pictures of them. One is a palomino. She is golden brown and has a lighter tail and mane. The other is a black quarter horse. He is a big horse and my grandfather rides him.

This is why I am nervous. He wants to teach me how to ride. I'm not sure I want to learn.

“I bet you're excited about visiting your Pappy! Maybe we should go and get you some boots for riding,” my mom says.

I just pretended not to hear her. Maybe I wouldn't have to learn to ride if I didn't have boots.

Why does everyone think I want to get on a horse? Well, maybe it's because I have always loved reading books about horses and playing with

my collection of horses. I even have a little horse barn. Just because I like reading books about horses and playing with toy horses doesn't mean I want to get way up high on a horse's back.

Maybe I'll pretend I'm sick. My stomach is in knots thinking about it. I don't know what I should do.

I hear my mom's phone ring. She is talking to Pappy. She hands the phone to me.

"Pappy wants to talk to you," she says.

"Hey there kiddo! How are you?" Pappy asks.

"I'm okay," I tell him.

Pappy says, "I can't wait to see you! I think you'll love the new place. It has a lot of trees, a fishing pond, and of course my horses. I think you will love Honey and Cocoa."

"You named the horses Honey and Cocoa?" I ask.

"I didn't name them. They're older horses. An old friend of mine had them and he moved to a place he couldn't have horses anymore. He gave them to me and will come and visit them whenever he can," Pappy explains.

"I see," I tell him.

Pappy asks me about school, and we talk for a while about all kinds of things. I hear Nana say something to him.

“Nana wants to talk to you, too,” Pappy says.

“Hello honey,” she says.

“Hi Nana. How’s your garden?” I ask her. At their old house where my grandparents lived, I would help her in the garden.

“It’s been great but now the pumpkins are taking over. I hope you’ll help me make a pie or two. You can take a few pumpkins home if you want,” she says.

I tell her I can make pies and help her with the garden. Maybe I will be so busy helping Nana that I won’t have time for horses.

Then she tells me, “Don’t worry about boots for riding. Our next door neighbor has a pair you can borrow. I can’t wait to see you. Pappy is so excited to teach you to ride!”

All I can think is OH NO! I think I got even more knots in my stomach. The day comes to go to my grandparent’s house and I feel sick. Like really feel sick. My mother turns to me in the car and asks if I am okay. I shrug and say sure. She smiles and squeezes my hand.

We arrive and Blue, my Pappy’s dog, runs over to us. I do love Blue! He is such a good dog.

“There they are! Blue was so excited to know you were coming!” my Pappy tells me. We take our suitcases into the house and Nana gets us some lemonade. I hear Pappy talking on the phone.

After we finish the lemonade, Pappy asks “Ready to meet Honey and Cocoa?” Everyone is so happy and excited but me.

We head outside and I see the horses and there is a girl on a different horse waiting.

“Hi! I’m Layla and I live next door. Your grandfather thought it would be fun to have me help teach you to ride,” she says.

Wow! She is riding a big white horse. She’s my age or a little older. She isn’t scared at all. Maybe just maybe I can learn to ride. Layla hops off her horse and hands me a carrot. She shows me how to feed the horses, so I don’t get nipped and talks so excitedly about them.

Layla says, “I’ve been helping your grandfather with these two. They are older and very, very gentle. I think you will love riding. You couldn’t pick a better horse to learn to ride on than one of these two.”

With Pappy and Layla helping me, I learn to ride Honey. Pappy likes to ride Cocoa. Layla rides Snowflake. We have a great time. While I make a few little mistakes, these horses didn’t mind at all.

Then, my Pappy says, “You are learning so quickly, maybe we need to enroll you in a horse jumping class!”

I sure hope he’s joking. Then he laughs and I know he is. I’m not quite ready for that.



Storytelling Contest  
Fall/Winter District 2022-23

“I Want a Dog!”  
Major Elements of the Plot

Grades 2 and 3

**Directions to Contest Directors:** Give a copy of this sheet to each judge before the contest begins.

**Directions to Judges:** Each speaker must include at least one of the following elements from the story in his or her presentation. Words may vary. It is up to the judge to decide if the speaker has included one of the elements.

1. The narrator wants a dog, despite their parents not believing the narrator is responsible enough to care for a dog. The narrator decides to get creative about demonstrating their responsibility to their parents.
2. The narrator and their mother go to a garage sale at Terry’s house. Terry is a friend of the narrator. At the garage sale, the narrator finds a leash and collar made to look like someone is walking an invisible dog.
3. The narrator takes the toy home and begins to pretend there is a real dog attached to the toy. They take the toy all over town, pretending they need to take their dog to the park for exercise or getting water for the dog while at a parade. The narrator names the pretend dog Houdini.
4. While at these locations, the narrator’s parents notice how responsible and caring the narrator is being toward Houdini.
5. The narrator’s parents decide to allow the narrator to adopt a real dog.



Storytelling Contest  
Fall/Winter District 2022-23

“I Want a Dog!”

Grades 2 and 3  
by Sherri Maret

I want a dog. My mom and dad say that a dog is a big responsibility.

“I don’t think you are ready for a dog yet,” my mom told me.

My dad said, “Your mother and I don’t have the time to take care of a dog.”

I told them I could be responsible. They both shook their heads and said we should wait until I was a little older.

But I don’t want to wait! I want a dog now!

Looks like I won’t be changing their mind. Maybe I can get more responsible, but how can I show them that? I need to think of a way to do this.

One morning my mom asked, “Do you want to go to the neighborhood garage sales with me? Terry’s mom said they were cleaning out their basement, so I know they are getting rid of a lot of things.”

Terry is one of my friends. I like my neighborhood because there are a lot of kids my age here.

I said “yes” and got five dollars out of my bank.

We walked up and down the street looking at all the stuff for sale.

While my mom was talking to Mrs. Carter, I looked at all kinds of things on one of the tables she had.

That is when I saw a leash and collar that was made to look like you were walking an invisible dog. It was a little banged up, but I fixed it. I practiced, and it really looked like I was walking an invisible dog.

I called to my mom, "Look! I have a dog!" I walked around showing her and Mrs. Carter, and they thought it was funny like I did.

Mrs. Carter said, "That has been in a box for years. It belonged to my grandson who is all grown up now."

While mom and Mrs. Carter talked, I walked the invisible dog back and forth in front of her house.

A lady and her little girl stopped me. The lady pretended to pet the dog's head. She turned to her little girl. "Do you want to pet the dog too?" The little girl laughed and pretended to pet the dog. Then the little girl asked, "What's your dog's name?"

"She doesn't have a name yet. I just got her," I told them. That's when I had an idea. I went back to talk to Mrs. Carter.

"I think want to buy this," I said to her.



“Your mom just bought all my canning equipment, so you can have it,” Mrs. Carter said.

“Wow! Thank you!” So, for the rest of the morning, I walked my dog.

When mom and I got home, my dad asked me about it.

I said, “If I can’t have a real dog, maybe I can play with this instead.”

After lunch, we went to the grocery store. I brought my invisible dog with me. “Why don’t you leave that in the car?” my mom asked.

“I know real dogs aren’t allowed in the store, but this isn’t a real dog. Can I please bring it?” My mom shrugged and said okay.

People stopped to look at me and my invisible dog. Some grown-ups just stared. Some of them laughed. Some kids giggled.

I began to take my invisible dog everywhere. Since I didn’t have a real dog, my mom and dad let me.

I named my invisible dog, Houdini.

I took him to the library.

I took him to the post office.

I took him shopping.

I took him with me when I went to get a haircut.

I also took him to the park. I went to the park all the time. My mom asked, “Why are you always going to the park?”

“My dog needs to get some exercise,” I told her.

For a month, I was very responsible about taking care of Houdini. Sometimes I would get funny looks from people. I think if my mom or dad were with me, they got a little embarrassed by it.

One day we were meeting my grandparents at a restaurant. My father asked, “Why can’t your dog stay in the car?”

I told him, “Dad, he isn’t a real dog. He’s imaginary. Invisible dogs are allowed in restaurants.” We had a nice dinner. Houdini didn’t cause any trouble.

One morning we got up to go to a parade. My cousin was going to be marching in the high school band. Of course, I had to take Houdini. My mother sighed. My father shrugged.

When most of the parade walked by, I tapped my mother on the arm to get her attention.

“My dog needs a drink.” My mother looked at me.

“Your dog is invisible and imaginary.” My mother said.

“I am trying to be responsible.” My mother looked at my father. We went looking for water. I was thirsty too.

One morning I returned to my house after playing with Houdini at the park.

My mom said let’s go into the living room.

My dad said, “Have a seat. We need to talk.”

Oh no. I wondered if something bad had happened.

My dad said, “Maybe you ARE responsible. Would you like to go look at some puppies?”

I was so happy and surprised. I dropped my leash and hugged my parents. After looking at puppies for a couple of weeks, I found the dog for me. She is black and brown. She is a mutt. She is snuggly and sweet. And she is all mine.

I have to go now. I need to take my dog for a walk in the park.



Storytelling Contest  
Spring District 2022-23

“Cabin in the Woods”  
Major Elements of the Plot

Grades 2 & 3

**Directions to Contest Directors:** Give a copy of this sheet to each judge before the contest begins.

**Directions to Judges:** Each speaker must include at least one of the following elements from the story in his or her presentation. Words may vary. It is up to the judge to decide if the speaker has included one of the elements.

1. The Smith family is going camping.
2. Dad asks the kids to help build a fire. The children bring sticks for the fire. The family eats hotdogs and marshmallows roasted over the fire.
3. One of the kids sees fireflies (lightning bugs), and the parents teach the children to catch the bugs in a jar. The family then went to bed for the night in their cabin.
4. The family wakes up and goes for a hike. Dad stops to show the kids what looks like gold in the ground. It is fool’s gold, but the kids take it any way as a souvenir from their trip.
5. At the end of the hike, the family looks out from the top of a hill, and they see their cabin, looking very small at the bottom of the valley. They take a family picture before leaving.



## Storytelling Contest

**Spring District 2022-23**

### “Cabin in the Woods”

Grades 2 and 3

by Kathryn Gonzales

The Smith family arrived at their campsite later than they expected. The three children were tired from the car ride yawning and stretching as they tumbled out of the van. Once they realized that the journey was over and the fun could begin they perked right up and headed toward their family cabin.

Mom and dad were unpacking the car urging the kids to help so the three kids ran back to the car to grab their bags, food and all the camping gear that was packed tightly into the vehicle. Mom told the kids to put the food near the fire pit that was outside the cabin so they could eat dinner soon.

Dad signaled for the kids to come over to the fire pit and said “I need help making the fire so I need you all to gather as many sticks as you can.” The kids jumped into action seeking out sticks trying to be the one who could gather the most.

The kids ran over, their arms full of branches urging their parents to judge who got the most. Mom said “you all got so many I can’t tell!” The kids looked at each other proudly and threw their sticks into a big pile.

Once the fire was fully ablaze and the sun had set, dad gave each of them a skewer to roast their own hotdog. Dad showed the kids how to position their hotdogs so they wouldn't get too close to the flames and burn.

Mom exclaimed "don't worry, if it's burnt I will eat it!" A few burnt hotdogs and toasted marshmallows later the family decided it was time to relax.

One of the children stood up really fast and pointed past the campfire, asking, "what is that?"

The rest of the family quickly stood up too and looked in that direction. Mom and dad started chuckling and looked at the kids saying, "those are fireflies, some people call them lightning bugs. Let's grab a few empty jars and catch some."

"Catch them?" the kids yelled. Mom said "Yeah, we used to catch them in jars when I was a kid. Let me show you." Mom grabbed an empty pickle jar and scooped up fireflies one by one midair. The children watched in awe at her lantern made of bugs. Dad passed out extra jars and told the kids to try it themselves.

After a few minutes of jumping and gathering up bugs each child had their own little lantern. Noticing the kids were starting to yawn, their parents lead them inside the cabin for a good night's rest.

The next morning was a late one. After everyone was awake and fed, mom and dad suggested they go on a hike. The kids let out a few groans but came around to the idea. Backpacks on and boots laced up everyone headed outside to the hiking trail.

One by one they trekked up the path to the top of the hill. Dad was in the front leading the family when he slowed down and picked up something shiny. He turned to the kids and said, “doesn’t this look like gold?”

The children’s eyes lit up as they saw what he was holding. “There is more over here” dad said pointing to the spot he got it from. The kids quickly jumped into action digging into the earth and gathering more of the stones.

Dad started laughing “it isn’t REAL gold, its fool’s gold. Still pretty but not worth much” The kids slowed down their mission, but dad told them to take a piece anyway, so they have something to remember their trip by.

After a long hike they finally reached the top of the hill that looks over the valley. Mom pointed in the distance “look we can see our cabin” The kids looked over and gasped at how small the house looked and how high up they were.

Dad urged everyone to sit down and rest while they took in the view and had water and a snack.

Before they headed back down, they asked another hiker to take their photo. The family huddled next to each other and smiled for the camera.



Storytelling Contest  
Spring District 2022-23

“Summer at Grandma and Grandpa’s”

Major Elements of the Plot

Grades 2 and 3

**Directions to Contest Directors:** Give a copy of this sheet to each judge before the contest begins.

**Directions to Judges:** Each speaker must include at least one of the following elements from the story in his or her presentation. Words may vary. It is up to the judge to decide if the speaker has included one of the elements.

1. At the beginning of the summer, Pat and Kathy Savage are told by their parents that they will spend the summer with their grandparents.
2. On the drive to their grandparents’ home, Pat and Kathy convince their parents to stop at a gas station for snacks and drinks.
3. Once they arrive at the house, Pat and Kathy run through the front gate to greet their grandparents. Their parents leave the kids to get settled.
4. Pat and Kathy explore their grandparents’ home. They climb a boulder at the bottom of a hill behind the house before their grandpa calls out to them, asking if they’d like to learn to fish.
5. Grandpa teaches Pat and Kathy to fish. Pat catches a fish, but Grandpa releases it back into the water, as they are only fishing for fun. Pat and Kathy go back up to the house to tell their grandma about fishing and how excited they were for the rest of the summer.





## Storytelling Contest

Spring District 2022-23

### “Summer at Grandma and Grandpa’s”

Grades 2 and 3

By Kathryn Gonzales

Spring sprang into summer and something weird was about to go down in the Savage household. Mom and dad sat Kathy and Pat down to have a family meeting. Paul and Tom were the oldest children and sat down also.

Mom and dad told the children that Pat and Kathy would be staying with their grandparents for the summer. Kathy and Pat cried that they didn’t want to go but mom explained that she would be going to nursing school.

The children quickly got on board to spend their summer away.

One-week later, Kathy and Pat packed their bags while Mom and Dad loaded the car. With everyone loaded into the minivan they drove away from their house and headed towards Grandma and Grandpa’s.

An hour into the drive the kids saw the sign for Buc-ee’s and roared “can we please stop and get a snack?” Mom and dad decided it was a good idea and pulled into the gas station. “When we get inside you both can get one snack and one drink” Mom told them.

The family made their way into Buc-ee’s and headed toward the soda fountain. “Be careful” dad said as he handed the children their cups. The

kids were excited to pick out their own drinks and quickly filled their cups up with soda. Kathy slowly walked to the counter where the lids were making sure not to spill while Pat's cup overflowed causing Mom to rescue him from the mess with a wad of napkins.

When everyone was back in the car and settled, they got back on the road to Grandma and Grandpa's.

The trip felt like it was taking forever but once they thought they couldn't be in the car anymore they arrived at their destination. The kids didn't know what to expect since it was their first time there. Dad stopped the car and the kids got out and yelled "we're here!"

The kids noticed a big gate in front of the car blocking the driveway. In the distance they saw their grandparents walking towards them from the house. Kathy and pat saw they could easily unlock the gate and push it open for their car to get through. When the gate was open, the kids took off running down the driveway to say hello and hug their grandparents.

After settling into the house, Pat and Kathy said goodbye to their parents and watched as they drove away.

Behind their grandparent's house, down a steep hill with lots of steps was a river that Pat and Kathy were eager to explore. A little nervous, both children started making their way step by step, lower and lower. Once at the bottom they saw a giant boulder and sprinted toward it. The kids raced to be the first one on top of the massive rock.

After fumbling a few times Kathy hoisted herself up and was the winner proclaiming she was queen of the rock. Pat laughed as he also made his way up and sat with Kathy on top of the boulder.

All of a sudden, they heard a voice yell out from the house. It was grandpa wanting to know if they felt like fishing. Sooner than they could respond grandpa was already down to the river with the fishing gear.

After quickly showing the kids how to bait their hook, grandpa stood up and showed them how to cast their fishing line into the water.

Pat and Kathy caught on quickly and before they knew it Pat already had a fish on the end of his line. Grandpa helped Pat slowly reel in his fish while Kathy jumped with excitement. Grandpa explained that we catch fish for fun as he unhooked the fish from the line and tossed the fish back into the river.

The children couldn't wait to tell Grandma about the fish they caught. Pat and Kathy ran up the stairs, into the house to find Grandma starting dinner.

They told her about their adventure and how excited they were to be there for the summer.