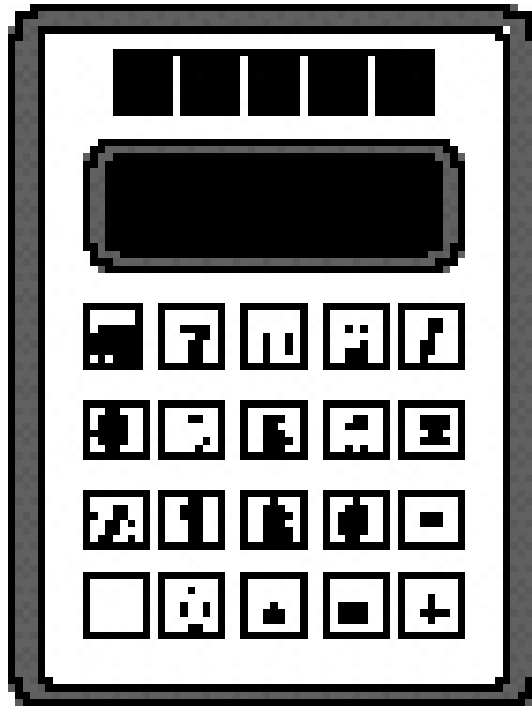


**INVITATIONAL 2022-2023**

**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= \_\_\_\_\_

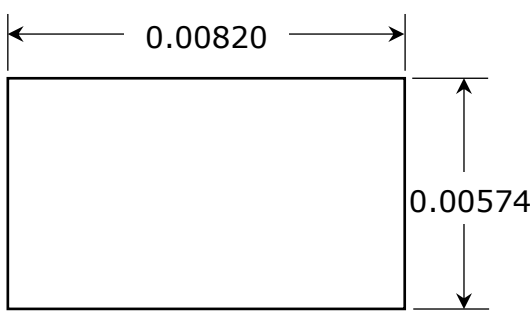
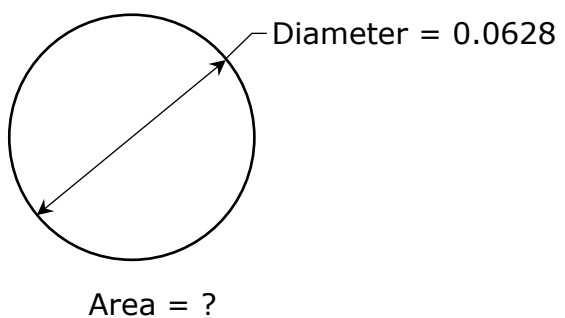
23X-32.  $(7.21)[(4.41 \times 10^{-9}) - (1.45 \times 10^{-9})]$  ----- 32= \_\_\_\_\_

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= \_\_\_\_\_

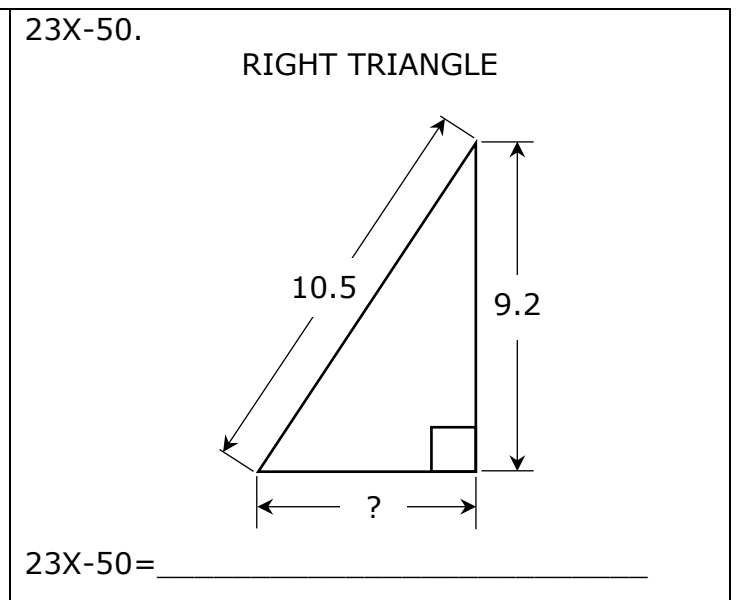
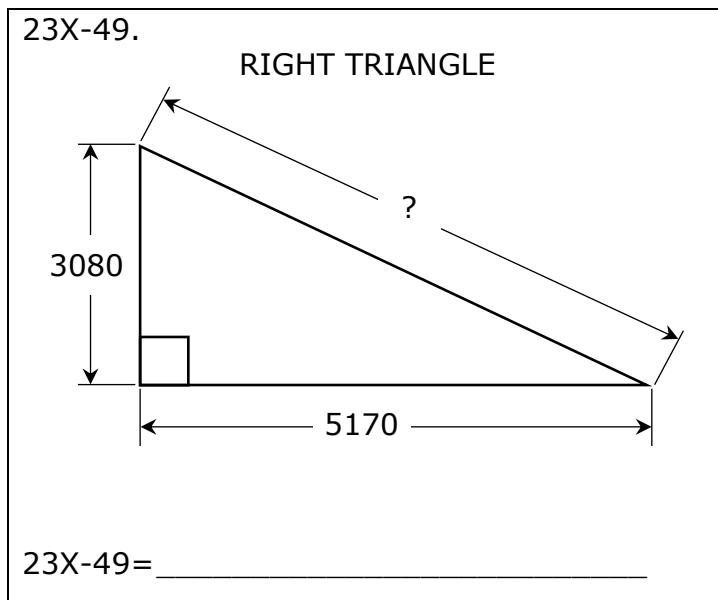
23X-44.  $(1/\pi)\sqrt{\frac{0.0616 + 0.0347}{0.0651 - 0.0214}}$  ----- 44= \_\_\_\_\_

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



23X-51.  $\frac{\sqrt{0.647 + \pi + 0.773}}{(0.0364 - 0.212 + 0.2)^2}$  ----- 51= \_\_\_\_\_

23X-52.  $\left[ \frac{\sqrt{\sqrt{192 - 126}}}{-(12800 - 19700)} \right]^3 [2150 + 1760]$  ----- 52= \_\_\_\_\_

23X-53.  $\sqrt{\frac{5.40 \times 10^8}{(560)(13500)}} + \frac{(1400 - 7810)}{(306 + 129)}$  ----- 53= \_\_\_\_\_

23X-54.  $0.294 + \sqrt{(756)/(8310)} - (0.395 + 0.332)^2$  ----- 54= \_\_\_\_\_

23X-55.  $\sqrt{\frac{(44500)(23100)}{(4.32 \times 10^5)(7250)}} - 0.145 + 0.457$  ----- 55= \_\_\_\_\_

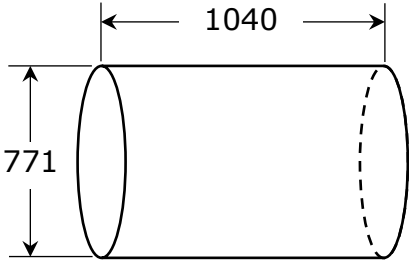
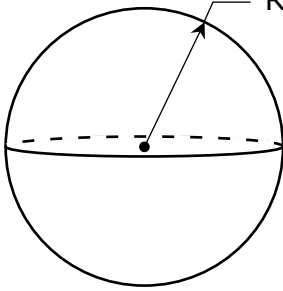
23X-56.  $(58.8)^2 \sqrt{(0.593)/(27.8)} - (359 + 287)$  ----- 56= \_\_\_\_\_

23X-57.  $\sqrt{\frac{(5.61)(57.2)}{(6.73) + (7.05)}} + 1/(0.769)^6$  ----- 57= \_\_\_\_\_

23X-58.  $(\text{rad}) \cos(6.66) + (34.8/4.81)$  ----- 58= \_\_\_\_\_

23X-59. On a particular day, the money exchange rate for the Mexican Peso to the US Dollar was 20.8199 Pesos to 1 US Dollar, while the Chinese Yuan (¥) to Mexican Peso rate was 1 Chinese Yuan to 3.02529 Mexican Pesos. If Mr. Ortega converted \$500 to Pesos and converted his Pesos in Beijing, China to Yuan, how many Yuan did he get to spend in China? - 59= \_\_\_\_\_ ¥

23X-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 for 3.17 seconds, how far does it fall? ----- 60= \_\_\_\_\_ ft

<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= \_\_\_\_\_

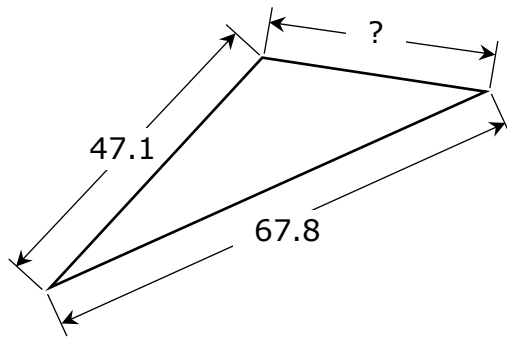
23X-70.  $(411 - 356 + 500)^{2/3}$  ----- 70= \_\_\_\_\_

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

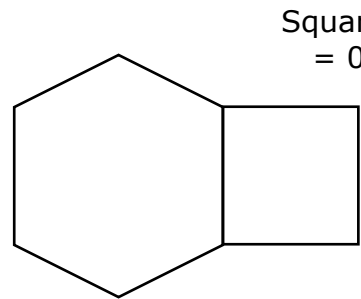


Semiperimeter = 75

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

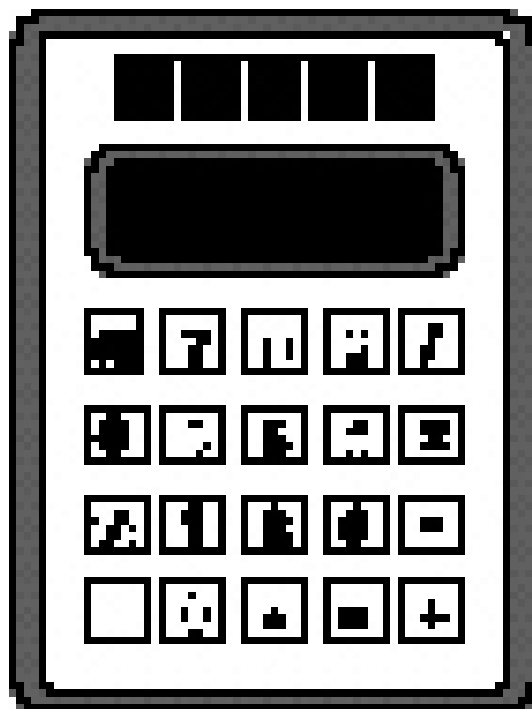
23X-39 = $7.87 \times 10^6$	23X-51 = 3590 = $3.59 \times 10^3$	23X-61 = $4.86 \times 10^8$	23X-73 = 35.1 = $3.51 \times 10^1$
23X-40 = $1.52 \times 10^{19}$	23X-52 = $2.76 \times 10^{-7}$	23X-62 = 8.92 = $8.92 \times 10^0$	23X-74 = 7.07 = $7.07 \times 10^0$
23X-41 = $7.29 \times 10^7$	23X-53 = -6.28 = $-6.28 \times 10^0$	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= \_\_\_\_\_

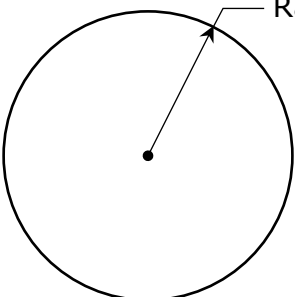
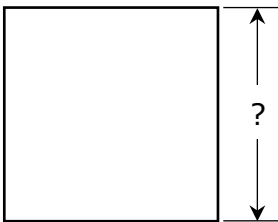
23Y-32.  $\frac{1}{31.6} + \frac{1}{(\pi)(209 - 162)}$  ----- 32= \_\_\_\_\_

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;">  <p style="margin-left: 100px;">Radius = 0.00384</p> <p style="margin-left: 100px;">Circumference = ?</p> </div> <p>23Y-37= _____</p>	<p>23Y-38. <span style="margin-left: 100px;">SQUARE</span></p> <div style="text-align: center;">  <p style="margin-left: 100px;">Perimeter = <math>8.29 \times 10^{12}</math></p> </div> <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= \_\_\_\_\_

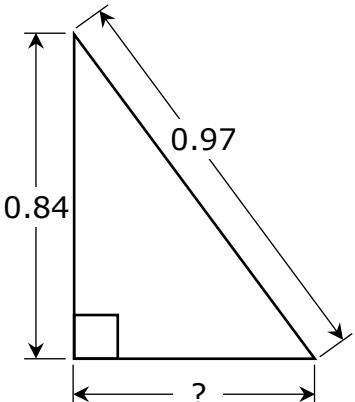
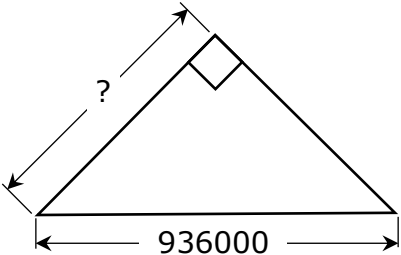
23Y-44.  $(1/\pi)\sqrt[4]{\frac{0.0186 + 0.0402}{0.146 - 0.142}}$  ----- 44= \_\_\_\_\_

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.  $\frac{(687 + 3910 - 4450)^2}{\sqrt{0.0709 + 0.0453 + 0.0752}}$  ----- 51= \_\_\_\_\_

23Y-52.  $\sqrt{\frac{0.395}{(0.0281)(419)}} + \frac{(0.0179 - 0.00918)}{(0.011 + 0.00998)}$  ----- 52= \_\_\_\_\_

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

23Y-54.  $7080 + \sqrt{(12800)(14300)} - (14300 + 13300)$  ----- 54= \_\_\_\_\_

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

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

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

23Y-58.  $\sqrt{\frac{(966)(2100)}{(7.37) + (12.9)}} - 400$  ----- 58= \_\_\_\_\_

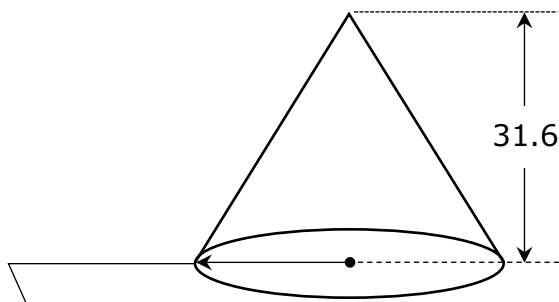
23Y-59. On a particular day, the money exchange rate for the Mexican Peso to the US Dollar was 20.4341 Pesos to 1 US Dollar, while the Norwegian Kroner (kr) to Mexican Peso rate was 2.01969 Mexican Pesos to 1 Norwegian Kroner. If Mrs. Silva converted \$1000 to Pesos and converted her Pesos in Oslo, Norway 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



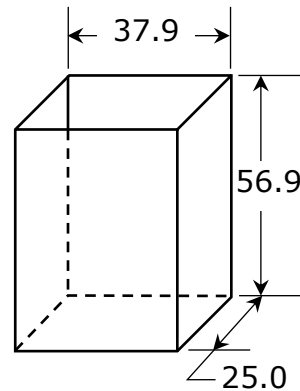
Radius = 18.3

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= \_\_\_\_\_

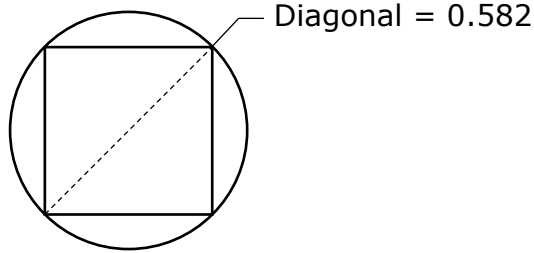
23Y-69. (rad)  $(14.2)\cos(223)$  ----- 69= \_\_\_\_\_

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= \_\_\_\_\_

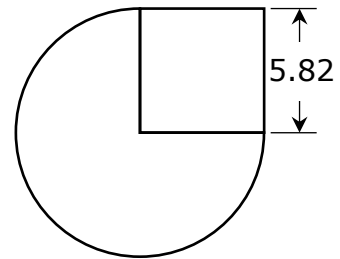
23Y-73.  
CIRCUMSCRIBED SQUARE AND CIRCLE



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

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

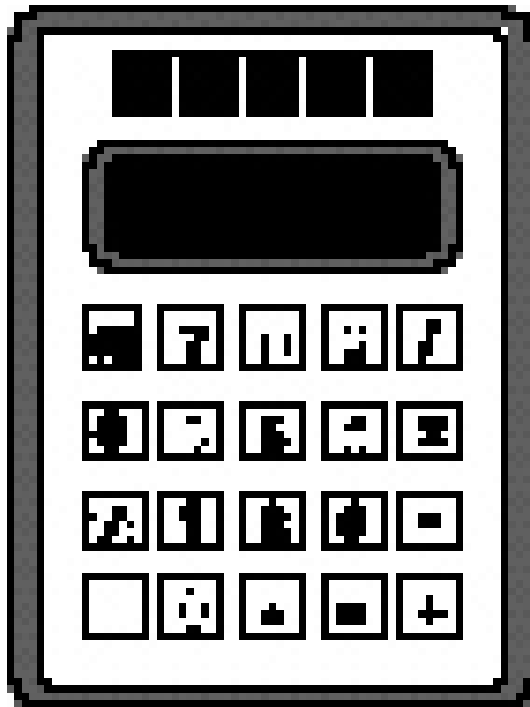
23Y-39 = $2.47 \times 10^8$	23Y-51 = 49400 = $4.94 \times 10^4$	23Y-61 = 11100 = $1.11 \times 10^4$	23Y-73 = 0.637 = $6.37 \times 10^{-1}$
23Y-40 = $2.73 \times 10^{10}$	23Y-52 = 0.599 = $5.99 \times 10^{-1}$	23Y-62 = 9050 = $9.05 \times 10^3$	23Y-74 = 114 = $1.14 \times 10^2$
23Y-41 = $3.81 \times 10^{10}$	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= \_\_\_\_\_

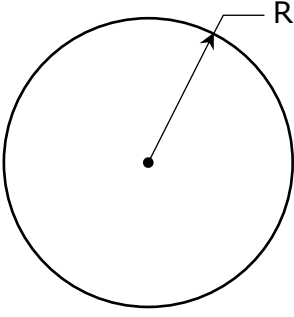
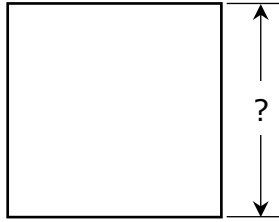
23Z-32.  $[5.55]^{\left[\frac{1/76.5}{1/44.8}\right]}$  ----- 32= \_\_\_\_\_

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= \_\_\_\_\_

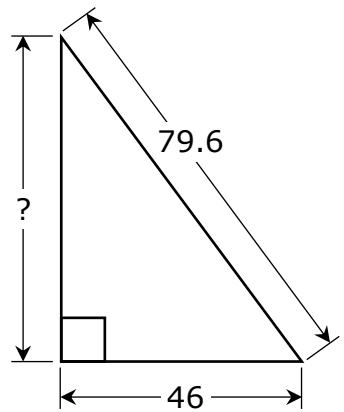
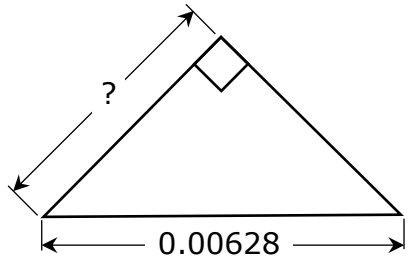
23Z-44.  $(1/\pi)\sqrt[3]{\frac{0.0368 + 0.021}{0.264 - 0.0945}}$  ----- 44= \_\_\_\_\_

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>
---	--

$$23Z-51. \quad \left[ \frac{70.1 + 30.1 + \sqrt{7970 + 1760}}{252/291} \right]^4 \text{ ----- } 51 = \underline{\hspace{2cm}}$$

$$23Z-52. \quad \frac{\sqrt{7.74 + \pi + 1.58}}{(24.1 - 80.7 + 67.4)^2} \text{ ----- } 52 = \underline{\hspace{2cm}}$$

$$23Z-53. \quad \left[ \frac{2920 - 2430 + \sqrt{2.28 \times 10^8 / 1230}}{-4380 + 6540} \right]^5 \text{ ----- } 53 = \underline{\hspace{2cm}}$$

$$23Z-54. \quad \sqrt{\frac{(6.03 \times 10^5)(24000)}{(56900)(63100)}} - 1.43 + 1.88 \text{ ----- } 54 = \underline{\hspace{2cm}}$$

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

$$23Z-56. \quad 34500 + \sqrt{(37200)(34200)} - (41100 + 6790) \text{ ----- } 56 = \underline{\hspace{2cm}}$$

$$23Z-57. \quad \sqrt{\frac{1/(101 - 33.7)}{(205)(18.6 + 39.5)^{-5}}} \text{ ----- } 57 = \underline{\hspace{2cm}}$$

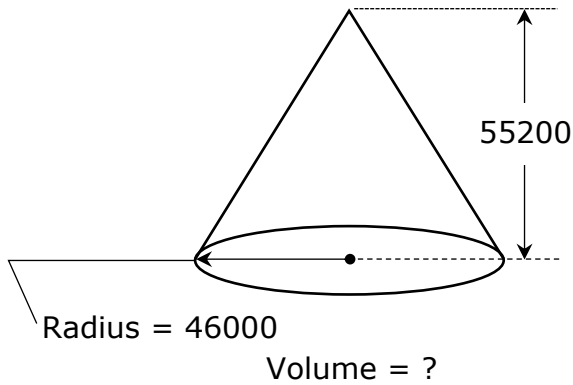
$$23Z-58. \quad \sqrt{\frac{(22.8)(63.8)}{(13.3) + (22.4)}} + 1/(0.156)^1 \text{ ----- } 58 = \underline{\hspace{2cm}}$$

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.

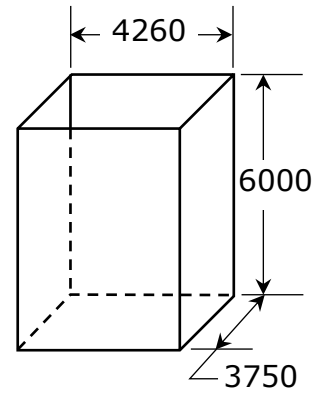
RIGHT CIRCULAR CONE



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= \_\_\_\_\_

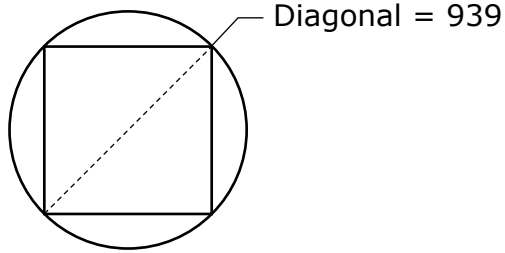
23Z-69. (deg)  $\frac{\sin(486^\circ)}{\tan(486^\circ)}[5.68]$  ----- 69= \_\_\_\_\_

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= \_\_\_\_\_

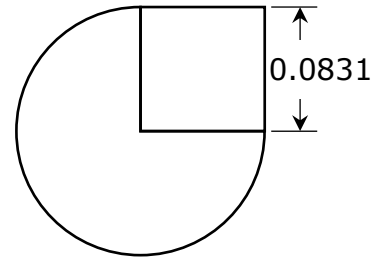
23Z-73.  
CIRCUMSCRIBED SQUARE AND CIRCLE



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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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