Problem Sequencing
UIL High School Number Sense Test

==========

Problem 1 - 20 *

1) Addition, subtraction, multiplication, & division of Integers, Mixed Numbers, Fractions, and Decimals
2) Order of Operations
3) Use of the Distributive Property
4) Comparison of Fractions and Decimals
5) Multiplication Short-Cuts
6) Squaring Numbers
7) Conversion Problems (either way): Percent/Fractions, English/Metric, Roman Numerals/Arabic Numerals, Measurement units (length, weight, capacity, time)
8) Greatest Common Divisor (GCD) and Least Common Multiple (LCM)
9) Percent Problems
10) Mean, Median, & Mode
11) Sums of Integers
12) Remainder Problems
13) Consumer Type Problems
14) Number Theory Problems Involving: Prime Numbers, Divisors, Sums of Divisors, etc.

Problems 21 - 40 *

1) Powers of Numbers
2) Substitution
3) Word Problems
4) Inverses
5) Absolute Value
6) Ratio/Proportion
7) Square Roots/Cube Roots
8) Sets
9) Base System Conversion Problems
10) Solving Simple Equations
11) Systems of Equations
12) Repeating Decimals to Fractions
13) More Remainder Type Problems
14) Perimeter & Area of Polygons and Circles
15) Sequences
16) Quadratic & Cubic Equation Problems

Problems 41 - 60 *

1) Laws of Exponents
2) Right Triangle Problems
3) Coordinate Geometry Problems
4) Regular Polygon Problems
5) Inequalities
6) Applications of Theorems from Geometry
7) Direct and Inverse Variation
8) Sequences & Series (Finite & Infinite)
9) Complex Numbers
10) Logarithms & Logarithmic Equations
11) Factorials, Permutations, & Combinations
12) Probability/Odds
13) Conics
14) Binomial Theorem (Expansion)
15) Base System Problems Using Operations
16) Roots of equations
17) Polygonal numbers

Problems 61 - 70 *

1) Volume & Surface Area
2) Greatest Integer
3) Application of Remainder Theorem
4) Trigonometry
5) Determinants
6) Matrices
7) Vectors
8) Composite Functions
9) Bases Involving Decimals or Fractions
10) Polar/Rectangular Coordinates

Problems 71 -80 *

1) Function domains and ranges
2) Modular Arithmetic
3) Limits
4) Derivatives
5) Slopes of Tangent Lines
6) Horizontal & Vertical Asymptotes
7) Determining Critical Values
8) Maximum & Minimum Problems
9) Definite Integration
10) Inverse functions

* A type of problem from a particular section could appear later in the test.
Example: A base problem could appear as problem #55, but should not appear earlier than problem #21.