

UIL High School Number Sense Test Problem Sequencing

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
- 8) Greatest Common Divisor (GCD) & 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 Problems
- 10) Solving Simple Equations
- 11) Simultaneous Equations
- 12) Repeating Decimals to Fractions
- 13) More Remainder Type Problems
- 14) Perimeter & Area Problems of Polygons
- 15) Sequences
- 16) Quadratic & Cubic Equation Problems

Problems 41 - 50

- 1) Laws of Exponents
- 2) Right Triangle Problems
- 3) Coordinate Geometry Problems
- 4) Regular Polygon Problems
- 5) Inequalities

Problems 51 - 60

- 1) Applications of Theorems from Geometry
- 2) Direct and Inverse Variation
- 3) Sequences & Series (Finite & Infinite)

Problems 51 - 70

- 1) Complex Numbers
- 2) Logarithms & Logarithmic Equations
- 3) Permutations & Combinations
- 4) Probability
- 5) Conics
- 6) Binomial Theorem (Expansion)

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

Problems 71 - 80

- 1) Value of Domain of a Given Function
- 2) Bases Involving Decimal Fractions
- 3) Polar/Rectangular Coordinates
- 4) Modular Arithmetic
- 5) Limits
- 6) Derivative
- 7) Slopes of Tangent Lines
- 8) Horizontal & Vertical Asymptotes
- 9) Determining Critical Values
- 10) Maximum & Minimum Problems
- 11) Definite Integration

*** 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.