

Elementary Number Sense

Problems 1-20:

- Addition, subtraction, multiplication, and division of (positive) whole numbers
- Recognizing place value
- Rounding numbers
- Multiplication short-cuts
- Remainder type problems
- Even and odd number type problems
- Expanded notation
- Sums of whole numbers (series)
- Roman numerals/Arabic numerals

Problems 21-40:

- Addition/subtraction of fractions with common denominators
- Addition, subtraction, multiplication, and division of decimal fractions
- Comparing decimal fractions and common fractions
- Conversion problems (fractions/percents/decimals)
- Order of operations
- Multiplication short-cuts
- Ratio/Proportion
- Consumer type problems
- Prime number problems
- Greatest common divisor (GCD) and Least common multiple (LCM) problems
- Conversion problem (length/weight/volume)

Problems 41-60:

- Addition, subtraction, multiplication, and division of fractions and mixed numbers
- Substitution problems
- Perimeter and area of squares, rectangles, triangle, circles
- Powers and roots of numbers
- Solving simple equations
- Sequences and series
- Sets
- Word problems
- Volume of cubes and rectangular boxes
- Right triangle problems
- Multiplication short-cuts
- Base systems
- Percent problems

Problems 61-80:

- Addition, subtraction, multiplication, and division of integers
- Inverses
- Basic geometry facts
- More area problems
- Squaring two-digit numbers
- Multiplication short-cuts
- Powers of numbers
- Consumer type problems
- Inequalities
- Probability
- Area problems with parallelograms, rhombi, and trapezoids
- Coordinate geometry on the number line
- More percent problems

Junior High Number Sense

Problems 1-20:

- Addition, subtraction, multiplication, and division of whole numbers, fractions, and decimals
- Order of operations
- Distributive property
- Comparison of fractions and decimals
- Multiplication short-cuts
- Squaring numbers
- Roman numerals/Arabic numerals
- Mean, median and mode
- Sums of whole numbers

Problems 21-40:

- Addition, subtraction, multiplication, and division of mixed numbers and integers
- Multiplication short-cuts
- Percent problems
- Conversion problems (English/metric, length, area, volume, time)
- Consumer type problems
- Substitution problems
- Solving simple equations
- Square roots and cube roots
- Greatest common divisor (GCD) and Least common multiple (LCM)
- Number theory
- Prime numbers
- Divisors
- Perimeter and area of squares, rectangles, and circles
- Ratio and proportion
- Inverses and reciprocals

Problems 41-60:

- Sets
- Word problems
- Pythagorean theorem
- Sequences
- Volume and Surface area of rectangular solids and cubes
- Base systems
- Area of parallelograms, rhombi, and trapezoids
- Solving inequalities
- Basic geometry facts
- Remainder problems
- Multiplication short-cuts

Problems 61-80:

- Repeating decimals
- Number theory
- Powers of numbers
- Volume of circular cylinders, pyramids, cones, and spheres
- Sequences and series
- Multiplication short-cuts
- Factorial
- Coordinate geometry
- Probability
- More percent problems
- More remainder problems

Problems listed in prior sections may appear further in the test. For example, a GCD problem could appear on the test no earlier than problem 21, but could appear at any problem numbered 21 through 80. If a problem appears beyond its listed section, you should expect that problem to be a more difficult version of the problem than if it had appeared in its listed section.