## Problem Sequencing Elementary Number Sense Test

## Problem I - 20*

I. Addition, subtraction, multiplication, \& division of whole numbers
2. Recognizing place value
3. Rounding off whole numbers
4. Multiplication short-cuts
5. Remainder type problems
6. Even \& odd number type problems
7. Expanded notation
8. Sums of whole numbers with regrouping
9. Differences of whole numbers with regrouping
10. Roman numerals/Arabic numbers conversion

## Problems 21-40

I. Addition/subtraction of fractions with common denominators
2. Addition, subtraction, multiplication, \& division of decimal fractions
3. Comparing decimal \& fractions
4. Conversion problems (either way): fraction/decimal, percent/fraction,
percent/decimal
5. Order of operations
6. More multiplication short-cuts
7. Ratio/proportion
8. Consumer type problems
9. Problems about prime numbers
10. Greatest common divisor (gcd) \& least common multiple (lcm)
II. Conversion problems (either way): length, measurements, time

## Problems 4I-60

I. Addition, subtraction, multiplication \& division of fractions and mixed numbers
2. Substitution problems
3. Perimeter/area of: square, rectangle, triangle
4. Radius/diameter of a circle
5. Powers \& roots of numbers
6. Solving simple equations
7. Sequences
8. Sets
9. Word problems
10. Volume of cube/rectangular box
II. Right triangle problems

I2. More multiplication short-cuts
13. Base systems conversions

## Problems 6|-80

I. Addition, subtraction, multiplication \& division of integers
2. Inverses
3. Basic geometry facts
4. More area problems
5. Squaring two-digit numbers
6. More multiplication short-cuts
7. More powers and roots of numbers
8. More consumer type problems
9. Inequalities
10. Probability
II. More area problems: parallelogram, rhombus, trapezoid
12. Coordinate geometry - number line
13. More percent type problems

## Problem Sequencing Junior High Number Sense Test

## Problems I-20*

I. Addition, subtraction, multiplication \& division of whole numbers, fractions, and decimals
2. Order of operations
3. Use of the distributive property
4. Comparison of fractions \& decimals
5. Multiplication short-cuts
6. Squaring numbers
7. Roman numerals/Arabic numbers
8. Mean, median, mode
9. Sums of whole numbers of multiple terms of a finite series

## Problems 2I-40

I. Addition, subtraction, multiplication \& division of mixed numbers and integers
2. More multiplication short-cuts
3. Percent problems
4. Conversion problems (either way): English/metric, length, area, capacity, time
5. Consumer type problems
6. Substitution problems
7. Solving simple equations
8. Square roots/cube roots
9. Greatest common divisor (gcd) \& least common multiple (lcm)
10. Number theory - prime numbers and divisors
II. Perimeter/area of: square, rectangle, circle
12. Ratio/proportion
13. Inverses
14. Multiplication of IOI, III

## Problems 4I-60

I. Sets
2. Word problems
3. Pythagorean theorem
4. Sequences
5. Volume/surface area of rectangular solid/cube
6. Base systems: conversions and basic operations
7. Area of: parallelogram, rhombus, trapezoid, circle
8. Solving inequalities
9. Basic geometry facts
10. Remainder problems

## Problems 6I-80

I. Repeating decimals
2. More number theory
3. Powers of numbers
4. Volume of: circular cylinder, cone, sphere
5. Sequences \& series
6. Factorial
7. Coordinate geometry
8. Probability/odds
9. More percent type problems:Advanced
10. More remainder type problems
II. More multiplication short-cuts

Number Sense

Number<br>Sense<br>Sequencing<br>lists have<br>been<br>updated<br>for 2016-<br>2017.

* A type of problem from a particular section could appear later in the test. For example, a GCD problem could appear as problem \#43, but not any earlier than problem \#2l.

