Key Statements Grades 3-8

Addition/Addition Facts

- Building through 5/10 helps with addition.
- When adding the same numbers in a different order, the quantity is the same. (Commutative Property)
- I can use part-part/whole relationship to solve addition problems.
- I can add two digit numbers by combining the tens and ones.
- When adding 10 the ones digit stays the same.
- I can combine numbers to make the equation more simple to solve (Associative Property) $5 + 3 + 2 = 5 + 5$
- + or – symbols tell us what operation to use when solving a problem.
- Decomposing and recomposing numbers allows us to add efficiently.

1 more/less10 more/less or 100 more/less

- 1 more or 1 less changes the ones place.
- 10 more or 10 less changes the tens place.
- 100 more or 100 less changes the hundreds place.

Subtraction/Subtraction Facts

- Think addition is a way to solve subtraction facts.
- Subtraction problems can be checked with addition.
- Building up through 10 can help with subtracting 8/9.
- Subtraction can be thought of as the distance between two numbers.
- When subtracting 10 the ones digit stays the same.
- Numbers can be rearranged to help with subtraction.
- Decomposing and recomposing numbers allows us to subtract efficiently.

Multiplication/Multiplication Facts

- Multiplication is repeated addition.
- Multiplication involves counting groups of like size.
- You can calculate unknown facts from those you know.
- Factors can be decomposed into smaller factors to help with multiplication facts. (i.e. 7 x 8 can be shown as 5 x8 plus 2 x 8, easier numbers with which to work.)

Division/Division Facts

- Division indicates the number of equal pieces in a given quantity.
- Think multiplication is a way to solve division facts.
- Multiplication and division are related.
- Division problems can be checked with multiplication.
- A remainder is part of the divisor expressed as a fraction or decimal.

Key Statements Grades 3-8

Regrouping

- A quantity can be rearranged in different ways and it is still the same quantity.
- Numbers can be rearranged/regrouped to help with subtraction.

Multi-digit Multiplication

- Partial products can help determine an answer to a multiplication problem.
- The value of a digit is determined by its position.

Place Value

- The value of a digit is determined by its position.
- Place values are based on groups of tens.
- The value of a digit in one place is 10 times what it represents in the place to the right.

Comparing numbers

- You can compare 2 numbers by determining the value of each digit.
- Comparing/ordering numbers involves first looking at the highest place value.

Rounding

- Rounding is approximating closeness to benchmark numbers.
- The value of a digit being rounded is determined by the value of the digit to the right.
- Rounding numbers makes them manageable while keeping their value similar.

Money

- Counting money involves skip counting by 1's, 5's, 10's, and 25's interchangeably.

Telling Time

- A clock uses a base of 60.
- Each number on a clock represents groups of 5.
- Telling time involves skip counting by 5's and adding ones.

Scientific Notation

- Powers of 10 move the decimal point.
- Scientific notation is used for very large or very small numbers.

Key Statements Grades 3-8

Decimal Multiplication

- Multiplying the whole numbers helps place the decimal.
- A reasonable answer helps place the decimal.

Fractions

- Fractions represent parts of equal shares.
- Benchmark fractions can be used to compare the size of fractions.
- A fraction can be represented in various equivalent ways.
- A common denominator shows same size pieces.
- Adding fractions with common denominators is adding equal sized pieces.
- A number shown as a fraction indicates a division problem.
- The relative size of a fraction is determined by the denominator.
- If based on a common whole and the numerators are the same, the larger the denominator, the smaller the fraction.
- If based on a common whole and the denominators are the same, the larger the numerator, the larger the fraction.

Geometry

- Shapes are classified by their attributes.
- Perimeter is the distance around a shape expressed in linear units.
- Area is a measure of covering expressed in square units.
- Base and height have a perpendicular relationship.
- The area formula comes from the perpendicular relationship of base and height.

Data

- Mean, median, and mode tell about the center of the data.

Algebra

- An equation shows two equivalent quantities.
- Solving an equation involves undoing the order of operations.

Proportional Reasoning

- A proportion is two equal ratios.

Integers

- Adding the opposite helps with subtracting integers.