

Concepts / skills are first marked where they are introduced. At subsequent grades they are developed and applied.

	PreK	K	1	2	3	4	5	6&7	Pre- Alg	Alg
Number Sense and Operations										
Number concepts										
Numbers and numerals	X	X	X	X	X	X	X	X	X	X
Relationships	X	X	X	X	X	X	X	X	X	X
Rational counting*	X	X	X	X	X	X	X	X	X	X
Base ten/place value			X	X	X	X	X	X	X	X
Ordinal numbers	X	X	X	X	X	X	X	X	X	X
Rounding				X	X	X	X	X	X	X
Rational Numbers										
Fractions	X	X	X	X	X	X	X	X	X	X
Decimals						X	X	X	X	X
Percents						X	X	X	X	X
Ratio / rates / proportions						X	X	X	X	X
Exponentials								X	X	X
Scientific Notation								X	X	X
Equivalence						X	X	X	X	X
Irrational Numbers								X	X	X
Number systems										
Sets and subsets	X	X	X	X	X	X	X	X	X	X
Number Theory										
Evens/odds		X	X	X	X	X	X	X	X	X
Factoring					X	X	X	X	X	X
Multiples				X	X	X	X	X	X	X
Prime factorization							X	X	X	X
Greatest common factor						X	X	X	X	X
Least common multiple						X	X	X	X	X
Mental math			X	X	X	X	X	X	X	X
Estimation	X	X	X	X	X	X	X	X	X	X
Calculator use			X	X	X	X	X	X	X	X
Scientific								X	X	X
Graphing										X
Number Sense and Operations con't.										

	PreK	K	1	2	3	4	5	6&7	Pre- Alg	Alg
Operation meanings & relationships										
Addition and subtraction	X	X	X	X	X	X	X	X	X	X
Multiplication and division				X	X	X	X	X	X	X
Squares and square roots						X	X	X	X	X
Absolute value									X	X
Basic facts										
Addition and subtraction	X	X	X	X	X	X	X	X	X	X
Multiplication and division					X	X	X	X	X	X
Addition and subtraction computation										
Whole numbers			X	X	X	X	X	X	X	X
Integers							X	X	X	X
Fractions						X	X	X	X	X
Decimals						X	X	X	X	X
Multiplication and division computation										
Whole numbers					X	X	X	X	X	X
Integers							X	X	X	X
Fractions						X	X	X	X	X
Decimals						X	X	X	X	X

	PreK	K	1	2	3	4	5	6&7	Pre- Alg	Alg
Measurement										
Measureable attributes of objects										
Length	X	X	X	X	X	X	X	X	X	X
Volume	X	X	X	X	X	X	X	X	X	X
Capacity					X	X	X	X	X	X
Mass / Weight	X	X	X	X	X	X	X	X	X	X
Time	X	X	X	X	X	X	X	X	X	X
Temperature		X	X	X	X	X	X	X	X	X
Angles			X	X	X	X	X	X	X	X
Money	X	X	X	X	X	X	X	X	X	X
Appropriate tools	X	X	X	X	X	X	X	X	X	X
Units of measure										
Customary		X	X	X	X	X	X	X	X	X
Metric			X	X	X	X	X	X	X	X
Conversions						X	X	X	X	X
Benchmarks					X	X	X	X	X	X
Formulas										
Perimeter					X	X	X	X	X	X
Circumference						X	X	X	X	X
Area					X	X	X	X	X	X
Surface area						X	X	X	X	X
Volume					X	X	X	X	X	X
Proportions and scale factors							X	X	X	X
Rates of derived measures (velocity, density)							X	X	X	X

	PreK	K	1	2	3	4	5	6&7	Pre- Alg	Alg
Geometry										
Sort	X	X	X	X	X	X	X	X	X	X
Classify	X	X	X	X	X	X	X	X	X	X
Locations/points	X	X	X	X	X	X	X	X	X	X
One-dimensional shapes	X	X	X	X	X	X	X	X	X	X
Two-dimensional shapes	X	X	X	X	X	X	X	X	X	X
Three-dimensional shapes	X	X	X	X	X	X	X	X	X	X
Geometric relationships	X	X	X	X	X	X	X	X	X	X
Coordinate geometry					X	X	X	X	X	X
Symmetry		X	X	X	X	X	X	X	X	X
Transformations										
Reflections/flips	X	X	X	X	X	X	X	X	X	X
Rotations/turns	X	X	X	X	X	X	X	X	X	X
Translations/slides					X	X	X	X	X	X
Congruence and similarity		X	X	X	X	X	X	X	X	X
Scaling							X	X	X	X
Visualization and spatial reasoning	X	X	X	X	X	X	X	X	X	X

Data Analysis and Probability										
Sampling					X	X	X	X	X	X
Populations					X	X	X	X	X	X
Formulate questions	X	X	X	X	X	X	X	X	X	X
Design studies							X	X	X	X
Collect data	X	X	X	X	X	X	X	X	X	X
Spreadsheets								X	X	X

	PreK	K	1	2	3	4	5	6&7	Pre- Alg	Alg
Data Analysis and Probability con't.										
Graphical representations*										
Picture graphs	X	X	X	X	X	X	X	X	X	X
Bar graphs	X	X	X	X	X	X	X	X	X	X
Line graphs				X	X	X	X	X	X	X
Histograms							X	X	X	X
Box-and-whisker plots									X	X
Scatterplots									X	X
Stem-and-leaf plots							X	X	X	X
Means of central tendency										
Mean						X	X	X	X	X
Median					X	X	X	X	X	X
Mode						X	X	X	X	X
Measures of spread tendency										
Range						X	X	X	X	X
Interquartile range									X	X
Concepts of probability										
Likelihood of outcomes	X	X	X	X	X	X	X	X	X	X
Certain		X	X	X	X	X	X	X	X	X
Impossible		X	X	X	X	X	X	X	X	X
Mutually exclusive									X	X
Complementary									X	X
Odds						X	X	X	X	X
Predict probability										
Experimental						X	X	X	X	X
Theoretical						X	X	X	X	X
Organized lists*					X	X	X	X	X	X
Tree diagrams*							X	X	X	X
Area models						X	X	X	X	X
Compute probabilities										
Simple events							X	X	X	X
Compound events										X
Problem Solving and Reasoning										

	PreK	K	1	2	3	4	5	6&7	Pre- Alg	Alg
Apply and adapt appropriate strategies	X	X	X	X	X	X	X	X	X	X
Use reasoning*	X	X	X	X	X	X	X	X	X	X
Build new mathematical knowledge	X	X	X	X	X	X	X	X	X	X
Process information*	X	X	X	X	X	X	X	X	X	X
Find best solution*	X	X	X	X	X	X	X	X	X	X

Communication										
Work cooperatively and individually	X	X	X	X	X	X	X	X	X	X
Representations with variety of media	X	X	X	X	X	X	X	X	X	X
Analyze mathematical thinking	X	X	X	X	X	X	X	X	X	X
Evaluate mathematical thinking	X	X	X	X	X	X	X	X	X	X
Communicate coherently and clearly	X	X	X	X	X	X	X	X	X	X
Use language of mathematics	X	X	X	X	X	X	X	X	X	X

Connections										
Within math strands	X	X	X	X	X	X	X	X	X	X
Apply mathematics to other contexts	X	X	X	X	X	X	X	X	X	X
Technology	X	X	X	X	X	X	X	X	X	X
Access information	X	X	X	X	X	X	X	X	X	X
Process information/data	X	X	X	X	X	X	X	X	X	X
Build coherent knowledge base	X	X	X	X	X	X	X	X	X	X

* Denotes topics included in the Discrete Math strand.