

PRE-ALGEBRA ESSENTIAL CONCEPTS

<p>September Use rational numbers in percent, decimal, and fraction form Apply rational numbers Identify pattern and effect of operations on rational numbers Estimate to check for reasonableness Identify relevant and extraneous information Integer operations Exponential notation Scientific notation Use simple proportions to solve problems</p>	<p>December Conducting surveys to collect data Organize and display data using line plots, bar graphs, stem and leaf plots, histograms, scatter plots, circle graphs, box and whisker plots, and pictographs Make conjectures, predictions and inferences from data Calculate mean, median, mode, and range Select a measure of central tendency Find effects of outliers and other data points on central tendency</p>	<p>March Recognize absolute value as a distance from zero Evaluate expressions containing absolute value Apply inverse relationships of operations Solve one-steps and two-step equations and inequalities Representing real world situations with equations and inequalities</p>
<p>October Estimate standard and metric measurements Use a conversion factor to convert measurements within the same system Create and interpret scale drawings maps, rulers Apply ratios, proportions and scale factors in problem solving Measure angles, perimeter, area and volume Use hands-on experiences to develop formulas for circumference and areas Apply formulas for circumference and area</p>	<p>January Conduct probability experiments to approximate probability Compare sample spaces to explore law of large numbers Find theoretical probability Represent probability as decimal, fraction, ratio, and percent Identify mutually exclusive events Recognize the sum of probabilities equals 1 Identify fair and unfair games and processes</p>	<p>April Graph ordered pairs on a coordinate plane Identify coordinates for graphed points Reflect a shape across a line and identify coordinates of vertices Translate a geometric shape and identify vertices Model real life linear patterns and relationships Create graphs, tables, and algebraic expressions to represent relationships between two variables</p>
<p>November Find surface area and volume of right prisms and cylinders Use proportional relationships to identify similar and congruent shapes Use similar triangles to find inaccessible height and distance Find a pattern comparing areas of similar objects Classify two-dimensional and three-dimensional objects Find patterns and proportional relationships in similar three-dimensional objects</p>	<p>February Create and extend numeric and visual patterns Represent patterns using algebraic expressions Model real life situations and data algebraically Evaluate algebraic expressions for given values Recognize multiplication properties of 1 Recognize that division by 0 is undefined Apply Commutative and Associative Properties Simplifying algebraic expressions</p>	<p>May Recognize slope as a rate of change Determine the slope of a linear relationship Identify intercepts of linear relationships Review for CRT</p>