

Number	Patterns and Relations	Shape and Space	Statistics and Probability
<p>General Outcome <i>Develop number sense.</i></p>	<p>General Outcome <i>Use patterns to describe the world and solve problems.</i></p>	<p>General Outcome <i>Use direct or indirect measurement to solve problems.</i></p>	<p>General Outcome <i>Collect, display, and analyze data to solve problems.</i></p>
<p>7.N.1. Determine and explain why a number is divisible by 2, 3, 4, 5, 6, 8, 9, or 10, and why a number cannot be divided by 0. [C, R]</p>	<p>7.PR.1. Demonstrate an understanding of oral and written patterns and their corresponding relations. [C, CN, R]</p>	<p>7.SS.1. Demonstrate an understanding of circles by</p> <ul style="list-style-type: none"> describing the relationships among radius, diameter, and circumference of circles relating circumference to pi determining the sum of the central angles constructing circles with a given radius or diameter solving problems involving the radii, diameters and circumferences of circles. <p>[C, CN, R, V]</p>	<p>7.SP.1. Demonstrate an understanding of central tendency and range by</p> <ul style="list-style-type: none"> determining the measures of central tendency (mean, median, mode) and range determining the most appropriate measures of central tendency to report findings. <p>[C, PS, R, T]</p>
<p>7.N.2. Demonstrate an understanding of the addition, subtraction, multiplication, and division of decimals to solve problems (for more than 1-digit divisors or 2-digit multipliers, the use of technology is expected). [ME, PS, T]</p>	<p>7.PR.2. Construct a table of values from a relation, graph the table of values, and analyze the graph to draw conclusions and solve problems. [C, CN, R, V]</p>	<p>7.SS.2. Develop and apply a formula for determining the area of</p> <ul style="list-style-type: none"> triangles parallelograms circles. <p>[CN, PS, R, V]</p>	<p>7.SP.2. Determine the effect on the mean, median and mode when an outlier is included in a data set. [C, CN, PS, R]</p>
<p>7.N.3. Solve problems involving percents from 1% to 100%. [C, CN, ME, PS, R, T]</p>	<p>General Outcome <i>Represent algebraic expressions in multiple ways.</i></p>	<p>General Outcome <i>Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.</i></p>	<p>7.SP.3. Construct, label, and interpret circle graphs to solve problems. [C, CN, PS, R, T, V]</p>
<p>7.N.4. Demonstrate an understanding of the relationship between repeating decimals and fractions, and terminating decimals and fractions. [C, CN, R, T]</p>	<p>7.PR.3. Demonstrate an understanding of preservation of equality by</p> <ul style="list-style-type: none"> modeling preservation of equality, concretely, pictorially, and symbolically applying preservation of equality to solve equations. <p>[C, CN, PS, R, V]</p>	<p>7.SS.3. Perform geometric constructions, including</p> <ul style="list-style-type: none"> perpendicular line segments parallel line segments perpendicular bisectors angle bisectors. <p>[CN, R, V]</p>	<p>General Outcome <i>Use experimental or theoretical probabilities to represent and solve problems involving uncertainty.</i></p>
<p>7.N.5. Demonstrate an understanding of adding and subtracting positive fractions and mixed numbers, with like and unlike denominators, concretely, pictorially, and symbolically (limited to positive sums and differences). [C, CN, ME, PS, R, V]</p>	<p>7.PR.4. Explain the difference between an expression and an equation. [C, CN]</p>	<p>General Outcome <i>Describe and analyze position and motion of objects and shapes.</i></p>	<p>7.SP.4. Express probabilities as ratios, fractions, and percents. [C, CN, R, T, V]</p>
<p>7.N.6. Demonstrate an understanding of addition and subtraction of integers, concretely, pictorially, and symbolically. [C, CN, PS, R, V]</p>	<p>7.PR.5. Evaluate an expression given the value of the variable(s). [CN, R]</p>	<p>7.SS.4. Identify and plot points in the four quadrants of a Cartesian plane using ordered pairs. [C, CN, V]</p>	<p>7.SP.5. Identify the sample space (where the combined sample space has 36 or fewer elements) for a probability experiment involving two independent events. [C, ME, PS]</p>
<p>7.N.7. Compare and order fractions, decimals (to thousandths) and integers by using</p> <ul style="list-style-type: none"> benchmarks place value equivalent fractions and/or decimals. <p>[CN, R, V]</p>	<p>7.PR.6. Model and solve problems that can be represented by one-step linear equations of the form $x + a = b$, concretely, pictorially, and symbolically, where a and b are integers. [CN, PS, R, V]</p>	<p>7.SS.5. Perform and describe transformations of a 2-D shape in all four-quadrants of a Cartesian plane (limited to integral vertices). [C, CN, PS, T, V]</p>	<p>7.SP.6. Conduct a probability experiment to compare the theoretical probability (determined using a tree diagram, table, or another graphic organizer) and experimental probability of two independent events. [C, PS, R, T]</p>
	<p>7.PR.7. Model and solve problems that can be represented by linear equations of the form</p> <ul style="list-style-type: none"> $ax + b = c$ $ax = b$ $\frac{x}{a} = b, a \neq 0$ <p>concretely, pictorially, and symbolically, where a, b and c are whole numbers. [CN, PS, R, V]</p>		

Processes:

C – Communication
PS – Problem Solving
V – Visualization

CN – Connections
R – Reasoning

ME – Mental Mathematics and Estimation
T – Technology