

<b>Number</b>
<p><b>General Outcome</b> <i>Develop number sense.</i></p>
<p>8.N.1. Demonstrate an understanding of perfect squares and square roots, concretely, pictorially, and symbolically (limited to whole numbers). [C, CN, R, V]</p>
<p>8.N.2. Determine the approximate square root of whole numbers that are not perfect squares (limited to whole numbers). [C, CN, ME, R, T]</p>
<p>8.N.3. Demonstrate an understanding of percents greater than or equal to 0%. [CN, PS, R, V]</p>
<p>8.N.4. Demonstrate an understanding of ratio and rate. [C, CN, V]</p>
<p>8.N.5. Solve problems that involve rates, ratios, and proportional reasoning. [C, CN, PS, R]</p>
<p>8.N.6. Demonstrate an understanding of multiplying and dividing positive fractions and mixed numbers, concretely, pictorially, and symbolically. [C, CN, ME, PS]</p>
<p>8.N.7. Demonstrate an understanding of multiplication and division of integers, concretely, pictorially, and symbolically. [C, CN, PS, R, V]</p>
<p>8.N.8. Solve problems involving positive rational numbers. [C, CN, ME, PS, R, T, V]</p>

<b>Patterns and Relations</b>
<p><b>General Outcome</b> <i>Use patterns to describe the world and solve problems.</i></p>
<p>8.PR.1. Graph and analyze two-variable linear relations. [C, ME, PS, R, T, V]</p>
<p><b>General Outcome</b> <i>Represent algebraic expressions in multiple ways.</i></p>
<p>8.PR.2. Model and solve problems using linear equations of the form</p> <ul style="list-style-type: none"> <li>• <math>ax = b</math></li> <li>• <math>\frac{x}{a} = b, a \neq 0</math></li> <li>• <math>ax + b = c</math></li> <li>• <math>\frac{x}{a} + b = c, a \neq 0</math></li> <li>• <math>a(x + b) = c</math></li> </ul> <p>concretely, pictorially, and symbolically, where <math>a, b</math> and <math>c</math> are integers. [C, CN, PS, V]</p>

<b>Shape and Space</b>
<p><b>General Outcome</b> <i>Use direct or indirect measurement to solve problems.</i></p>
<p>8.SS.1. Develop and apply the Pythagorean theorem to solve problems. [CN, PS, R, T, V]</p>
<p>8.SS.2. Draw and construct nets for 3-D objects. [C, CN, PS, V]</p>
<p>8.SS.3. Determine the surface area of</p> <ul style="list-style-type: none"> <li>• right rectangular prisms</li> <li>• right triangular prisms</li> <li>• right cylinders</li> </ul> <p>to solve problems. [C, CN, PS, R, V]</p>
<p>8.SS.4. Develop and apply formulas for determining the volume of right prisms and right cylinders. [C, CN, PS, R, V]</p>
<p><b>General Outcome</b> <i>Describe the characteristics of 3-D objects and 2-D shapes, and analyze the relationships among them.</i></p>
<p>8.SS.5. Draw and interpret top, front, and side views of 3-D objects composed of right rectangular prisms. [C, CN, R, T, V]</p>
<p><b>General Outcome</b> <i>Describe and analyze position and motion of objects and shapes.</i></p>
<p>8.SS.6. Demonstrate an understanding of tessellation by</p> <ul style="list-style-type: none"> <li>• explaining the properties of shapes that make tessellating possible</li> <li>• creating tessellations</li> <li>• identifying tessellations in the environment.</li> </ul> <p>[C, CN, PS, T, V]</p>

<b>Statistics and Probability</b>
<p><b>General Outcome</b> <i>Collect, display, and analyze data to solve problems.</i></p>
<p>8.SP.1. Critique ways in which data are presented. [C, R, T, V]</p>
<p><b>General Outcome</b> <i>Use experimental or theoretical probabilities to represent and solve problems involving uncertainty.</i></p>
<p>8.SP.2. Solve problems involving the probability of independent events. [C, CN, PS, T]</p>

Processes:

C – Communication  
PS – Problem Solving  
V – Visualization

CN – Connections  
R – Reasoning

ME – Mental Mathematics and Estimation  
T – Technology