

Skills and Concepts to Enhance (73% Probability*) 211 - 220	Skills and Concepts to Develop (50% Probability*) 221 - 230	Skills and Concepts to Introduce (27% Probability*) 231 - 240
<p><b>Geometric Measurement and Relationships</b></p> <ul style="list-style-type: none"> <li>• Uses the appropriate unit of measure for length</li> <li>• Knows the approximate size of a millimeter</li> <li>• Selects and uses the appropriate type and size of unit in metric system (mass)</li> <li>• Solves simple problems involving capacity</li> <li>• Estimates the measure of acute, right, and obtuse angles using 45 and 90 degrees as referents</li> <li>• Measures angles using a protractor</li> <li>• Determines the perimeter of a figure using non-standard units</li> <li>• Solves problems involving the perimeter of squares, rectangles, or triangles</li> <li>• Finds the perimeter of a polygon using a formula</li> <li>• Describes the change in perimeter when dimensions of an object are altered</li> <li>• Determines the diameter, given the radius, and vice versa</li> <li>• Describes the change in area of a triangle when 1 dimension of an object is altered (metric units)</li> <li>• Determines the area of irregular shapes with partial square units</li> <li>• Estimates and finds volume of a figure using cubic units</li> <li>• Calculates the volume of a rectangular prism, and converts to a different measurement scale (customary units)</li> <li>• Identifies rays</li> <li>• Identifies properties of angles</li> <li>• Identifies acute angles</li> <li>• Identifies obtuse angles</li> <li>• Identifies and names a trapezoid</li> <li>• Identifies and names a rhombus</li> <li>• Identifies and names a quadrilateral</li> <li>• Classifies polygons by type of angle</li> <li>• Identifies corners (vertices) of cubes</li> <li>• Identifies the net which makes a cube-like (open box) figure</li> <li>• Identifies the number of edges on rectangular prisms</li> <li>• Predicts and verifies the effects of combining or subdividing basic shapes</li> <li>• Determines an appropriate scale for representing a distance on a map</li> </ul>	<p><b>Geometric Measurement and Relationships</b></p> <ul style="list-style-type: none"> <li>• Determines coordinates of geometric figures in the first quadrant</li> <li>• Measures length to the nearest millimeter</li> <li>• Determines the perimeter of a figure using non-standard units</li> <li>• Solves problems involving the perimeter of squares, rectangles, or triangles</li> <li>• Solves problems involving the perimeter of irregular or complex shapes</li> <li>• Describes the change in perimeter when dimensions of an object are altered</li> <li>• Describes the change in area of a triangle when 1 dimension of an object is altered (metric units)</li> <li>• Calculates the area of a rectangle, given labeled sides (customary units)</li> <li>• Determines the length or width of a rectangle, given the area (metric units)</li> <li>• Solves simple problems involving the area of a square or rectangle</li> <li>• Calculates the base or height of a parallelogram, given the area and formula (metric)</li> <li>• Determines the area of irregular shapes (customary units)</li> <li>• Calculates area and perimeter of a rectangle (customary units)</li> <li>• Calculates the volume of rectangular solids</li> <li>• Calculates the volume of a rectangular prism, and converts to a different measurement scale (customary units)</li> <li>• Identifies rays</li> <li>• Determines which lines are perpendicular (analysis)</li> <li>• Identifies and determines missing angle measures for supplementary angles</li> <li>• Identifies acute angles</li> <li>• Classifies equilateral triangles</li> <li>• Identifies and names a rhombus</li> <li>• Identifies and names a quadrilateral</li> <li>• Compares polygons by properties</li> <li>• Identifies properties of quadrilaterals</li> <li>• Classifies polygons by type of angle</li> <li>• Identifies the number of edges on rectangular prisms</li> <li>• Uses similarity to solve problems using scale drawings</li> <li>• Determines an appropriate scale for representing an object in a scale drawing</li> </ul>	<p><b>Geometric Measurement and Relationships</b></p> <ul style="list-style-type: none"> <li>• Measures length to the nearest millimeter</li> <li>• Solves problems involving the perimeter of irregular or complex shapes</li> <li>• Describes the change in perimeter when dimensions of an object are altered</li> <li>• Identifies the formula for perimeter with a variable</li> <li>• Determines the circumference when given the diameter or radius (or vice versa)</li> <li>• Determines the circumference when given the area of a circle (or vice versa)</li> <li>• Knows the relationship between radius, diameter, and circumference</li> <li>• Compares area of numerous triangles</li> <li>• Determines the area of a triangle drawn on a grid</li> <li>• Determines the area of a triangle, given the formula</li> <li>• Calculates the area of a rectangle, given labeled sides (customary units)</li> <li>• Determines the length or width of a rectangle, given the area (metric units)</li> <li>• Describes the change in area of a rectangle when dimensions of an object are altered</li> <li>• Solves simple problems involving the area of a square or rectangle</li> <li>• Determines the area of a parallelogram, given a labeled diagram</li> <li>• Calculates the base or height of a parallelogram, given the area and formula (metric)</li> <li>• Determines the area of a trapezoid, given the formula (metric units)</li> <li>• Solves problems comparing areas of different polygons</li> <li>• Determines the area of irregular shapes (customary units)</li> <li>• Understands the procedure for finding the area and surface area of figures</li> <li>• Calculates the volume of rectangular solids</li> <li>• Calculates the length, width, or height of a rectangular prism, given the area (customary units)</li> <li>• Calculates the volume of a rectangular prism, and converts to a different measurement scale (customary units)</li> <li>• Determines which lines are perpendicular (analysis)</li> <li>• Classifies isosceles triangles</li> <li>• Classifies scalene triangles</li> <li>• Identifies properties of circles</li> <li>• Compares polygons by properties</li> <li>• Identifies properties of quadrilaterals</li> </ul>

#### Explanatory Notes

\* At the range mid-point, this is the probability students would correctly answer items measuring these concepts and skills. Both data from test items and review by NWEA curriculum specialists are used to place Learning Continuum statements into appropriate RIT ranges. Blank cells indicate data are limited or unavailable for this range or document version.

Skills and Concepts to Enhance (73% Probability*) 211 - 220	Skills and Concepts to Develop (50% Probability*) 221 - 230	Skills and Concepts to Introduce (27% Probability*) 231 - 240
Geometric Measurement and Relationships	Geometric Measurement and Relationships	Geometric Measurement and Relationships
		<ul style="list-style-type: none"> <li>• Uses similarity to solve problems using scale drawings</li> <li>• Explores maps and relates them to measurements of real distances, using proportional reasoning</li> <li>• Determines an appropriate scale for representing an object in a scale drawing</li> </ul>
<b>Congruence, Similarity, Right Triangles, &amp; Trig</b>	<b>Congruence, Similarity, Right Triangles, &amp; Trig</b>	<b>Congruence, Similarity, Right Triangles, &amp; Trig</b>
<ul style="list-style-type: none"> <li>• Identifies similar and congruent triangles</li> <li>• Uses similar figures to construct ratios and solve for a missing side</li> <li>• Identifies geometric transformations (rotations)</li> <li>• Identifies geometric transformations (translations)</li> </ul>	<ul style="list-style-type: none"> <li>• Identifies properties of parallel and perpendicular lines</li> <li>• Recognizes the interior angle relationships of triangles</li> <li>• Uses similar figures to construct ratios and solve for a missing side</li> <li>• Uses similar triangles to construct ratios and solve for a missing side</li> <li>• Identifies geometric transformations (rotations)</li> <li>• Identifies geometric transformations (translations)</li> <li>• Identifies geometric transformations (reflections)</li> </ul>	<ul style="list-style-type: none"> <li>• Identifies and determines a missing angle measure in corresponding, vertical, and alternate exterior/interior angles</li> <li>• Recognizes the interior angle relationships of triangles</li> <li>• Identifies properties of congruent triangles</li> <li>• Solves problems involving properties of congruent triangles</li> <li>• Uses similar triangles to construct ratios and solve for a missing side</li> <li>• Identifies geometric transformations (dilations)</li> <li>• Identifies geometric transformations (reflections)</li> <li>• Determines whether a given pair of figures on a coordinate plane represents a translation, reflection, rotation, or dilation</li> </ul>
<i>New Vocabulary:</i> acute angle, congruent angle, cord, dilation, obtuse angle, straight angle, transformation	<i>New Vocabulary:</i> cubic meter, interior angle, long, scale factor	<i>New Vocabulary:</i> None
<i>New Signs and Symbols:</i> ∠ angle, angle marker (arc), ↓ measurement span down, ← measurement span left, → measurement span right, ↑ measurement span up, mm millimeter/millimetre, • point, right angle marker, : used with time	<i>New Signs and Symbols:</i> ( ) ordered pair, ' feet, h height, " inches, = is equal to, = is equal to, l length, x multiplication, : ratio, V volume, w width	<i>New Signs and Symbols:</i> ( ) order of operations, + addition, C circumference, congruent segment symbol, d diameter, x multiplication, P perimeter, π pi, r radius

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