DesCartes
(Combined)

Subject: Mathematics
Goal: Geometry

Subject: Mathematics
Goal Strand: Geometry
RIT Score Range: Below 161

Skills and Concepts to Develop Below 161	Skills and Concepts to Introduce 161 - 170
Describing Figures	**Describing Figures**
	• Identifies and names a triangle • Identifies and names a square • Identifies and names a rectangle* • Identifies and names a circle* • Identifies sides and vertices of polygons • Identifies bases of a cylinder* • Identifies and names a cone • Compares open and closed figures* • Sorts solid figures and objects according to attributes*
Spatial Relationships and Transformations	**Spatial Relationships and Transformations**
• Identifies figures that are the same size and shape • Predicts the shape after unfolding a figure*	• Identifies figures that are the same size and shape
Coordinate Systems	**Coordinate Systems**
New Vocabulary: size	*New Vocabulary:* circle, corner, cylinder, flat
New Signs and Symbols: none	*New Signs and Symbols:* none

Subject: Mathematics
Goal Strand: Geometry
RIT Score Range: 161 - 170

Skills and Concepts to Enhance Below 161	Skills and Concepts to Develop 161 - 170	Skills and Concepts to Introduce 171 - 180
Describing Figures	**Describing Figures**	**Describing Figures**
	• Identifies and names a triangle • Identifies and names a square • Identifies and names a rectangle* • Identifies and names a circle* • Identifies sides and vertices of polygons • Identifies bases of a cylinder* • Identifies and names a cone • Compares open and closed figures* • Sorts solid figures and objects according to attributes*	• Identifies and names a triangle • Identifies and names a square • Identifies and names a rectangle* • Identifies and names a circle* • Identifies and names a cube
Spatial Relationships and Transformations	**Spatial Relationships and Transformations**	**Spatial Relationships and Transformations**
• Identifies figures that are the same size and shape • Predicts the shape after unfolding a figure*	• Identifies figures that are the same size and shape	• Identifies spatial sense concepts (e.g., outside, inside, between, over, under, above, below, behind, in front, middle)* • Identifies figures that are similar
Coordinate Systems	**Coordinate Systems**	**Coordinate Systems**
New Vocabulary: size	*New Vocabulary:* circle, corner, cylinder, flat	*New Vocabulary:* geometric figure, outside, similar
New Signs and Symbols: none	*New Signs and Symbols:* none	*New Signs and Symbols:* ? next in sequence

Subject: Mathematics
Goal Strand: Geometry
RIT Score Range: 171 - 180

Skills and Concepts to Enhance 161 - 170	Skills and Concepts to Develop 171 - 180	Skills and Concepts to Introduce 181 - 190
Describing Figures	**Describing Figures**	**Describing Figures**
• Identifies and names a triangle • Identifies and names a square • Identifies and names a rectangle* • Identifies and names a circle* • Identifies sides and vertices of polygons • Identifies bases of a cylinder* • Identifies and names a cone • Compares open and closed figures* • Sorts solid figures and objects according to attributes*	• Identifies and names a triangle • Identifies and names a square • Identifies and names a rectangle* • Identifies and names a circle* • Identifies and names a cube	• Identifies points on a line* • Identifies congruent line segments* • Identifies and names multiple shapes (e.g., square, rectangle, triangle, circle)* • Classifies polygons by sides and vertices • Identifies and names a cube • Identifies and names a sphere
Spatial Relationships and Transformations	**Spatial Relationships and Transformations**	**Spatial Relationships and Transformations**
• Identifies figures that are the same size and shape	• Identifies spatial sense concepts (e.g., outside, inside, between, over, under, above, below, behind, in front, middle)* • Identifies figures that are similar	• Identifies congruent figures • Identifies figures that are similar • Identifies plane figures with line symmetry • Identifies transformations of plane figures (rotations/turns) • Identifies transformations of plane figures (translations/slides)*
Coordinate Systems	**Coordinate Systems**	**Coordinate Systems**
		• Determines and names locations in the first quadrant on a labeled grid or coordinate system (e.g., map or graph)*
New Vocabulary: circle, corner, cylinder, flat	*New Vocabulary:* geometric figure, outside, similar	*New Vocabulary:* clockwise, flip, grid, line of symmetry, rectangular solid, rotation, symmetry, turn
New Signs and Symbols: none	*New Signs and Symbols:* ? next in sequence	*New Signs and Symbols:* ( ) ordered pair, • point

Subject: Mathematics
Goal Strand: Geometry
RIT Score Range: 181 - 190

Skills and Concepts to Enhance 171 - 180	Skills and Concepts to Develop 181 - 190	Skills and Concepts to Introduce 191 - 200
Describing Figures	**Describing Figures**	**Describing Figures**
• Identifies and names a triangle • Identifies and names a square • Identifies and names a rectangle* • Identifies and names a circle* • Identifies and names a cube	• Identifies points on a line* • Identifies congruent line segments* • Identifies and names multiple shapes (e.g., square, rectangle, triangle, circle)* • Classifies polygons by sides and vertices • Identifies and names a cube • Identifies and names a sphere	• Identifies lines* • Identifies parallel lines • Identifies angles* • Identifies points on a circle* • Identifies diagonals of a polygon • Identifies and names a polygon* • Identifies and names a pentagon* • Identifies the number of faces on rectangular prisms • Identifies and names a cylinder • Identifies and names a sphere • Sorts 2-D shapes and objects according to their attributes
Spatial Relationships and Transformations	**Spatial Relationships and Transformations**	**Spatial Relationships and Transformations**
• Identifies spatial sense concepts (e.g., outside, inside, between, over, under, above, below, behind, in front, middle)* • Identifies figures that are similar	• Identifies congruent figures • Identifies figures that are similar • Identifies plane figures with line symmetry • Identifies transformations of plane figures (rotations/turns) • Identifies transformations of plane figures (translations/slides)*	• Creates a new shape by combining different shapes, or identifies the different shapes that were used to make the original shape* • Identifies position of shapes (e.g., inside, outside, between)* • Identifies figures that are the same size and shape (analysis)* • Identifies congruent figures • Explores maps and relates them to measurements of real distances, using the scale* • Identifies plane figures with line symmetry • Identifies the number of lines of symmetry in plane figures • Identifies transformations of plane figures (reflections/flips)
Coordinate Systems	**Coordinate Systems**	**Coordinate Systems**
	• Determines and names locations in the first quadrant on a labeled grid or coordinate system (e.g., map or graph)*	• Determines and names locations in the first quadrant on a labeled grid or coordinate system (e.g., map or graph)*
New Vocabulary: geometric figure, outside, similar	*New Vocabulary:* clockwise, flip, grid, line of symmetry, rectangular solid, rotation, symmetry, turn	*New Vocabulary:* diagonal, face, inside, intersect, kite, large, oval, parallel, plane, polygon, rhombus, same shape, scale, straight, twist, vertical line

* 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.

New Signs and Symbols: ? next in sequence	*New Signs and Symbols:* ( ) ordered pair, • point	*New Signs and Symbols:* • multiplication symbol

Subject: Mathematics
Goal Strand: Geometry
RIT Score Range: 191 - 200

Skills and Concepts to Enhance 181 - 190	Skills and Concepts to Develop 191 - 200	Skills and Concepts to Introduce 201 - 210
Describing Figures	**Describing Figures**	**Describing Figures**
• Identifies points on a line* • Identifies congruent line segments* • Identifies and names multiple shapes (e.g., square, rectangle, triangle, circle)* • Classifies polygons by sides and vertices • Identifies and names a cube • Identifies and names a sphere	• Identifies lines* • Identifies parallel lines • Identifies angles* • Identifies points on a circle* • Identifies diagonals of a polygon • Identifies and names a polygon* • Identifies and names a pentagon* • Identifies the number of faces on rectangular prisms • Identifies and names a cylinder • Identifies and names a sphere • Sorts 2-D shapes and objects according to their attributes	• Use patterns and their generalizations to make and justify inferences and predictions* • Produces a valid conjecture using inductive reasoning by generalizing from a pattern of observations* • Identifies the intersection point of two lines* • Identifies intersecting lines • Identifies parallel lines • Identifies angles* • Identifies right angles* • Identifies and names a parallelogram* • Identifies and names a polygon* • Identifies and names a hexagon* • Identifies and names a octagon* • Classifies polygons by sides and angles • Classifies cubes by their properties (e.g., edges with equal lengths, faces with equal areas and congruent shapes, right angle corners) • Identifies a cube from a net • Identifies and names a cylinder • Classifies cylinders by their properties (e.g., base shape, lateral surface shape, vertices)*
Spatial Relationships and Transformations	**Spatial Relationships and Transformations**	**Spatial Relationships and Transformations**
• Identifies congruent figures • Identifies figures that are similar • Identifies plane figures with line symmetry • Identifies transformations of plane figures (rotations/turns) • Identifies transformations of plane figures (translations/slides)*	• Creates a new shape by combining different shapes, or identifies the different shapes that were used to make the original shape* • Identifies position of shapes (e.g., inside, outside, between)* • Identifies figures that are the same size and shape (analysis)* • Identifies congruent figures • Explores maps and relates them to measurements of real distances, using the scale* • Identifies plane figures with line symmetry • Identifies the number of lines of symmetry in plane figures	• Classifies plane figures by the number of lines of symmetry* • Defines transformations*

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* Both data from test items and review by NWEA curriculum specialists are used to place learning continuum statements into appropriate RIT ranges.
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	• Identifies transformations of plane figures (reflections/flips)	
Coordinate Systems	**Coordinate Systems**	**Coordinate Systems**
• Determines and names locations in the first quadrant on a labeled grid or coordinate system (e.g., map or graph)*	• Determines and names locations in the first quadrant on a labeled grid or coordinate system (e.g., map or graph)*	• Graphs ordered pairs in the first quadrant • Determines and names locations in the first quadrant on a labeled grid or coordinate system (e.g., map or graph)* • Determines the distance between horizontal and vertical lines in the first quadrant of a rectangular coordinate system* • Locates the origin on a coordinate grid*
New Vocabulary: clockwise, flip, grid, line of symmetry, rectangular solid, rotation, symmetry, turn	*New Vocabulary:* diagonal, face, inside, intersect, kite, large, oval, parallel, plane, polygon, rhombus, same shape, scale, straight, twist, vertical line	*New Vocabulary:* coordinate, coordinate point, edge, fold, larger, mirror image, octagon, ordered pair, origin, parallel line, rectangular box, regular polygon, trapezoid, vertex
New Signs and Symbols: ( ) ordered pair, • point	*New Signs and Symbols:* • multiplication symbol	*New Signs and Symbols:* = is equal to, ↔ line symbol, × multiplication

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Subject: Mathematics
Goal Strand: Geometry
RIT Score Range: 201 - 210

Skills and Concepts to Enhance 191 - 200	Skills and Concepts to Develop 201 - 210	Skills and Concepts to Introduce 211 - 220
Describing Figures	**Describing Figures**	**Describing Figures**
• Identifies lines* • Identifies parallel lines • Identifies angles* • Identifies points on a circle* • Identifies diagonals of a polygon • Identifies and names a polygon* • Identifies and names a pentagon* • Identifies the number of faces on rectangular prisms • Identifies and names a cylinder • Identifies and names a sphere • Sorts 2-D shapes and objects according to their attributes	• Use patterns and their generalizations to make and justify inferences and predictions* • Produces a valid conjecture using inductive reasoning by generalizing from a pattern of observations* • Identifies the intersection point of two lines* • Identifies intersecting lines • Identifies parallel lines • Identifies angles* • Identifies right angles* • Identifies and names a parallelogram* • Identifies and names a polygon* • Identifies and names a hexagon* • Identifies and names a octagon* • Classifies polygons by sides and angles • Classifies cubes by their properties (e.g., edges with equal lengths, faces with equal areas and congruent shapes, right angle corners) • Identifies a cube from a net • Identifies and names a cylinder • Classifies cylinders by their properties (e.g., base shape, lateral surface shape, vertices)*	• Produces a valid conjecture using inductive reasoning by generalizing from a pattern of observations* • Identifies rays* • Identifies perpendicular lines* • Describes relationships among points, lines, and planes, and identifies models in the environment* • Identifies right angles within adjacent angles* • Identifies properties of angles • Identifies acute angles • Identifies obtuse angles • Identifies the diameter of a circle* • Identifies the circumference of circle* • Identifies the number of degrees in a circle* • Identifies and names a quadrilateral* • Identifies altitudes of polygons (not triangles)* • Classifies polygons by type of angle* • Classifies polygons by number of sides* • Identifies corners (vertices) of cubes* • Identifies the net which makes a cube-like (open box) figure* • Identifies and names a rectangular prism* • Classifies triangular prisms by their properties (e.g., base shape, lateral surface shape, vertices)* • Compares simple plane figures to solid figures (e.g., circle/sphere, square/cube, rectangle/rectangular solid)*
Spatial Relationships and Transformations	**Spatial Relationships and Transformations**	**Spatial Relationships and Transformations**
• Creates a new shape by combining different shapes, or identifies the different shapes that were used to make the original shape* • Identifies position of shapes (e.g., inside, outside, between)* • Identifies figures that are the same size and shape (analysis)* • Identifies congruent figures	• Classifies plane figures by the number of lines of symmetry* • Defines transformations*	• Predicts and verifies the effects of combining or subdividing basic shapes • Identifies similar and congruent triangles* • Identifies congruent polygons and their corresponding sides and angles* • Defines "similarity"* • Recognizes similar figures in the real world* • Determines an appropriate scale for representing a

• Explores maps and relates them to measurements of real distances, using the scale* • Identifies plane figures with line symmetry • Identifies the number of lines of symmetry in plane figures • Identifies transformations of plane figures (reflections/flips)		distance on a map* • Uses similar figures to construct ratios and solve for a missing side* • Classifies plane figures by the number of lines of symmetry* • Identifies geometric transformations (rotations)* • Identifies geometric transformations (translations)* • Identifies geometric transformations (reflections)*
Coordinate Systems	**Coordinate Systems**	**Coordinate Systems**
• Determines and names locations in the first quadrant on a labeled grid or coordinate system (e.g., map or graph)*	• Graphs ordered pairs in the first quadrant • Determines and names locations in the first quadrant on a labeled grid or coordinate system (e.g., map or graph)* • Determines the distance between horizontal and vertical lines in the first quadrant of a rectangular coordinate system* • Locates the origin on a coordinate grid*	• Determines the distance between horizontal and vertical lines in the first quadrant of a rectangular coordinate system* • Locates the origin on a coordinate grid*
New Vocabulary: diagonal, face, inside, intersect, kite, large, oval, parallel, plane, polygon, rhombus, same shape, scale, straight, twist, vertical line	*New Vocabulary:* coordinate, coordinate point, edge, fold, larger, mirror image, octagon, ordered pair, origin, parallel line, rectangular box, regular polygon, trapezoid, vertex	*New Vocabulary:* acute angle, congruent angle, dilation, enlargement, geometric solid, obtuse angle, perpendicular line, straight angle, tessellation, three-dimensional, transformation, translation, union
New Signs and Symbols: • multiplication symbol	*New Signs and Symbols:* = is equal to, ↔ line symbol, × multiplication	*New Signs and Symbols:* ∠ angle, angle marker (arc), ° degrees, mm millimeter/millimetre, right angle marker, segment overbar

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Subject: Mathematics
Goal Strand: Geometry
RIT Score Range: 211 - 220

Skills and Concepts to Enhance 201 - 210	Skills and Concepts to Develop 211 - 220	Skills and Concepts to Introduce 221 - 230
Describing Figures	**Describing Figures**	**Describing Figures**
• Use patterns and their generalizations to make and justify inferences and predictions* • Produces a valid conjecture using inductive reasoning by generalizing from a pattern of observations* • Identifies the intersection point of two lines* • Identifies intersecting lines • Identifies parallel lines • Identifies angles* • Identifies right angles* • Identifies and names a parallelogram* • Identifies and names a polygon* • Identifies and names a hexagon* • Identifies and names a octagon* • Classifies polygons by sides and angles • Classifies cubes by their properties (e.g., edges with equal lengths, faces with equal areas and congruent shapes, right angle corners) • Identifies a cube from a net • Identifies and names a cylinder • Classifies cylinders by their properties (e.g., base shape, lateral surface shape, vertices)*	• Produces a valid conjecture using inductive reasoning by generalizing from a pattern of observations* • Identifies rays* • Identifies perpendicular lines* • Describes relationships among points, lines, and planes, and identifies models in the environment* • Identifies right angles within adjacent angles* • Identifies properties of angles • Identifies acute angles • Identifies obtuse angles • Identifies the diameter of a circle* • Identifies the circumference of circle* • Identifies the number of degrees in a circle* • Identifies and names a quadrilateral* • Identifies altitudes of polygons (not triangles)* • Classifies polygons by type of angle* • Classifies polygons by number of sides* • Identifies corners (vertices) of cubes* • Identifies the net which makes a cube-like (open box) figure* • Identifies and names a rectangular prism* • Classifies triangular prisms by their properties (e.g., base shape, lateral surface shape, vertices)* • Compares simple plane figures to solid figures (e.g., circle/sphere, square/cube, rectangle/rectangular solid)*	• Produces a valid conjecture using inductive reasoning by generalizing from a pattern of observations* • Identifies rays* • Determines which lines are perpendicular (analysis)* • Identifies properties of parallel and perpendicular lines • Identifies right angles within adjacent angles* • Identifies and determines missing angle measures for supplementary angles • Identifies acute angles • Recognizes the interior angle relationships of triangles • Classifies equilateral triangles* • Identifies and names a trapezoid* • Identifies the radius of a circle • Identifies the diameter of a circle* • Identifies the circumference of circle* • Identifies the number of degrees in a circle* • Identifies and names a quadrilateral* • Compares polygons by properties • Identifies the number of diagonals of regular polygons* • Identifies properties of quadrilaterals* • Classifies polygons by type of angle* • Identifies the number of edges on rectangular prisms*
Spatial Relationships and Transformations	**Spatial Relationships and Transformations**	**Spatial Relationships and Transformations**
• Classifies plane figures by the number of lines of symmetry* • Defines transformations*	• Predicts and verifies the effects of combining or subdividing basic shapes • Identifies similar and congruent triangles* • Identifies congruent polygons and their corresponding sides and angles* • Defines "similarity"* • Recognizes similar figures in the real world* • Determines an appropriate scale for representing a	• Uses similarity to solve problems using scale drawings • Uses similar figures to construct ratios and solve for a missing side* • Uses similar triangles to construct ratios and solve for a missing side • Predicts changes necessary to create symmetry in basic plane shapes* • Identifies geometric transformations (rotations)*

* Both data from test items and review by NWEA curriculum specialists are used to place learning continuum statements into appropriate RIT ranges.
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	distance on a map* • Uses similar figures to construct ratios and solve for a missing side* • Classifies plane figures by the number of lines of symmetry* • Identifies geometric transformations (rotations)* • Identifies geometric transformations (translations)* • Identifies geometric transformations (reflections)*	• Identifies geometric transformations (translations)* • Identifies geometric transformations (reflections)*
Coordinate Systems	**Coordinate Systems**	**Coordinate Systems**
• Graphs ordered pairs in the first quadrant • Determines and names locations in the first quadrant on a labeled grid or coordinate system (e.g., map or graph)* • Determines the distance between horizontal and vertical lines in the first quadrant of a rectangular coordinate system* • Locates the origin on a coordinate grid*	• Determines the distance between horizontal and vertical lines in the first quadrant of a rectangular coordinate system* • Locates the origin on a coordinate grid*	• Determines coordinates of geometric figures in the first quadrant • Determines the distance between points, following grid lines, in the first quadrant on a coordinate graph (as in city blocks)* • Graphs ordered pairs in all quadrants • Computes and interprets the midpoint, given a set of ordered pairs (horizontal and vertical lines)* • Computes and interprets distance, given a set of ordered pairs (horizontal and vertical lines)*
New Vocabulary: coordinate, coordinate point, edge, fold, larger, mirror image, octagon, ordered pair, origin, parallel line, rectangular box, regular polygon, trapezoid, vertex	*New Vocabulary:* acute angle, congruent angle, dilation, enlargement, geometric solid, obtuse angle, perpendicular line, straight angle, tessellation, three-dimensional, transformation, translation, union	*New Vocabulary:* arc, center, central angle, congruent side, equilateral, interior angle, isosceles triangle, long, midpoint, obtuse triangle, right triangle, scalene triangle, sum of measures
New Signs and Symbols: = is equal to, ↔ line symbol, × multiplication	*New Signs and Symbols:* ∠ angle, angle marker (arc), ° degrees, mm millimeter/millimetre, right angle marker, segment overbar	*New Signs and Symbols:* ( ) order of operations, cm centimeter/centimetre, ' feet, " inches, m meter/metre, − negative number, parallel symbol, π pi, : ratio, × multiplication, = is equal to, Δ triangle

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Subject: Mathematics
Goal Strand: Geometry
RIT Score Range: 221 - 230

Skills and Concepts to Enhance 211 - 220	Skills and Concepts to Develop 221 - 230	Skills and Concepts to Introduce 231 - 240
Describing Figures	**Describing Figures**	**Describing Figures**
• Produces a valid conjecture using inductive reasoning by generalizing from a pattern of observations* • Identifies rays* • Identifies perpendicular lines* • Describes relationships among points, lines, and planes, and identifies models in the environment* • Identifies right angles within adjacent angles* • Identifies properties of angles • Identifies acute angles • Identifies obtuse angles • Identifies the diameter of a circle* • Identifies the circumference of circle* • Identifies the number of degrees in a circle* • Identifies and names a quadrilateral* • Identifies altitudes of polygons (not triangles)* • Classifies polygons by type of angle* • Classifies polygons by number of sides* • Identifies corners (vertices) of cubes* • Identifies the net which makes a cube-like (open box) figure* • Identifies and names a rectangular prism* • Classifies triangular prisms by their properties (e.g., base shape, lateral surface shape, vertices)* • Compares simple plane figures to solid figures (e.g., circle/sphere, square/cube, rectangle/rectangular solid)*	• Produces a valid conjecture using inductive reasoning by generalizing from a pattern of observations* • Identifies rays* • Determines which lines are perpendicular (analysis)* • Identifies properties of parallel and perpendicular lines • Identifies right angles within adjacent angles* • Identifies and determines missing angle measures for supplementary angles • Identifies acute angles • Recognizes the interior angle relationships of triangles • Classifies equilateral triangles* • Identifies and names a trapezoid* • Identifies the radius of a circle • Identifies the diameter of a circle* • Identifies the circumference of circle* • Identifies the number of degrees in a circle* • Identifies and names a quadrilateral* • Compares polygons by properties • Identifies the number of diagonals of regular polygons* • Identifies properties of quadrilaterals* • Classifies polygons by type of angle* • Identifies the number of edges on rectangular prisms*	• Determines which lines are perpendicular (analysis)* • Identifies and measures straight angles • Identifies and determines a missing angle measure in corresponding, vertical, and alternate exterior/interior angles* • Identifies parts of a right triangle (legs, hypotenuse, angles)* • Recognizes the interior angle relationships of triangles • Classifies isosceles triangles • Classifies scalene triangles* • Identifies properties of circles • Compares polygons by properties • Classifies square pyramids by their properties (e.g., base shape, lateral surface shape, vertices)* • Classifies rectangular pyramids by their properties (e.g., base shape, lateral surface shape, vertices)*
Spatial Relationships and Transformations	**Spatial Relationships and Transformations**	**Spatial Relationships and Transformations**
• Predicts and verifies the effects of combining or subdividing basic shapes • Identifies similar and congruent triangles* • Identifies congruent polygons and their corresponding sides and angles* • Defines "similarity"* • Recognizes similar figures in the real world* • Determines an appropriate scale for representing a	• Uses similarity to solve problems using scale drawings • Uses similar figures to construct ratios and solve for a missing side* • Uses similar triangles to construct ratios and solve for a missing side • Predicts changes necessary to create symmetry in basic plane shapes* • Identifies geometric transformations (rotations)*	• Identifies properties of congruent triangles* • Solves problems involving properties of congruent triangles • Uses similarity to solve problems using scale drawings • Explores maps and relates them to measurements of real distances, using proportional reasoning • Determines an appropriate scale for representing an object in a scale drawing*

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distance on a map* • Uses similar figures to construct ratios and solve for a missing side* • Classifies plane figures by the number of lines of symmetry* • Identifies geometric transformations (rotations)* • Identifies geometric transformations (translations)* • Identifies geometric transformations (reflections)*	• Identifies geometric transformations (translations)* • Identifies geometric transformations (reflections)*	• Uses similar triangles to construct ratios and solve for a missing side • Identifies geometric transformations (dilations)
Coordinate Systems	**Coordinate Systems**	**Coordinate Systems**
• Determines the distance between horizontal and vertical lines in the first quadrant of a rectangular coordinate system* • Locates the origin on a coordinate grid*	• Determines coordinates of geometric figures in the first quadrant • Determines the distance between points, following grid lines, in the first quadrant on a coordinate graph (as in city blocks)* • Graphs ordered pairs in all quadrants • Computes and interprets the midpoint, given a set of ordered pairs (horizontal and vertical lines)* • Computes and interprets distance, given a set of ordered pairs (horizontal and vertical lines)*	• Graphs ordered pairs in all quadrants • Computes and interprets the midpoint, given a set of ordered pairs (horizontal and vertical lines)* • Computes and interprets distance, given a set of ordered pairs (horizontal and vertical lines)*
New Vocabulary: acute angle, congruent angle, dilation, enlargement, geometric solid, obtuse angle, perpendicular line, straight angle, tessellation, three-dimensional, transformation, translation, union	*New Vocabulary:* arc, center, central angle, congruent side, equilateral, interior angle, isosceles triangle, long, midpoint, obtuse triangle, right triangle, scalene triangle, sum of measures	*New Vocabulary:* acute triangle, chord, corresponding side, equiangular triangle, secant, square pyramid, tangent
New Signs and Symbols: ∠ angle, angle marker (arc), ° degrees, mm millimeter/millimetre, right angle marker, segment overbar	*New Signs and Symbols:* ( ) order of operations, cm centimeter/centimetre, ' feet, " inches, m meter/metre, − negative number, parallel symbol, π pi, : ratio, × multiplication, = is equal to, Δ triangle	*New Signs and Symbols:* congruent segment symbol, ft feet, in. inch, ≅ is congruent to

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Subject: Mathematics
Goal Strand: Geometry
RIT Score Range: 231 - 240

Skills and Concepts to Enhance 221 - 230	Skills and Concepts to Develop 231 - 240	Skills and Concepts to Introduce 241 - 250
Describing Figures	**Describing Figures**	**Describing Figures**
• Produces a valid conjecture using inductive reasoning by generalizing from a pattern of observations* • Identifies rays* • Determines which lines are perpendicular (analysis)* • Identifies properties of parallel and perpendicular lines • Identifies right angles within adjacent angles* • Identifies and determines missing angle measures for supplementary angles • Identifies acute angles • Recognizes the interior angle relationships of triangles • Classifies equilateral triangles* • Identifies and names a trapezoid* • Identifies the radius of a circle • Identifies the diameter of a circle* • Identifies the circumference of circle* • Identifies the number of degrees in a circle* • Identifies and names a quadrilateral* • Compares polygons by properties • Identifies the number of diagonals of regular polygons* • Identifies properties of quadrilaterals* • Classifies polygons by type of angle* • Identifies the number of edges on rectangular prisms*	• Determines which lines are perpendicular (analysis)* • Identifies and measures straight angles • Identifies and determines a missing angle measure in corresponding, vertical, and alternate exterior/interior angles* • Identifies parts of a right triangle (legs, hypotenuse, angles)* • Recognizes the interior angle relationships of triangles • Classifies isosceles triangles • Classifies scalene triangles* • Identifies properties of circles • Compares polygons by properties • Classifies square pyramids by their properties (e.g., base shape, lateral surface shape, vertices)* • Classifies rectangular pyramids by their properties (e.g., base shape, lateral surface shape, vertices)*	• Identifies the converse or inverse of a conditional statement* • Identifies properties of congruent angles* • Identifies and determines missing angle measures for complementary angles • Uses properties of angles and figures to solve algebraic problems* • Identifies and determines a missing angle measure in corresponding, vertical, and alternate exterior/interior angles* • Defines angles using properties (e.g., acute, obtuse, right, straight, reflex)* • Identifies corresponding and alternate exterior/interior angles • Recognizes that the sum of the measures of two sides of a triangle must be greater than the measure of the third side* • Recognizes the exterior angle relationships of triangles* • Classifies right triangles by defining properties* • Identifies and names a rhombus* • Identifies symmetry of a sphere*
Spatial Relationships and Transformations	**Spatial Relationships and Transformations**	**Spatial Relationships and Transformations**
• Uses similarity to solve problems using scale drawings • Uses similar figures to construct ratios and solve for a missing side* • Uses similar triangles to construct ratios and solve for a missing side • Predicts changes necessary to create symmetry in basic plane shapes* • Identifies geometric transformations (rotations)* • Identifies geometric transformations (translations)* • Identifies geometric transformations (reflections)*	• Identifies properties of congruent triangles* • Solves problems involving properties of congruent triangles • Uses similarity to solve problems using scale drawings • Explores maps and relates them to measurements of real distances, using proportional reasoning • Determines an appropriate scale for representing an object in a scale drawing* • Uses similar triangles to construct ratios and solve for a missing side • Identifies geometric transformations (dilations)	• Constructs congruent figures* • Identifies properties of similar figures*

WI 3.2.1
* Both data from test items and review by NWEA curriculum specialists are used to place learning continuum statements into appropriate RIT ranges.
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Coordinate Systems	Coordinate Systems	Coordinate Systems
• Determines coordinates of geometric figures in the first quadrant • Determines the distance between points, following grid lines, in the first quadrant on a coordinate graph (as in city blocks)* • Graphs ordered pairs in all quadrants • Computes and interprets the midpoint, given a set of ordered pairs (horizontal and vertical lines)* • Computes and interprets distance, given a set of ordered pairs (horizontal and vertical lines)*	• Graphs ordered pairs in all quadrants • Computes and interprets the midpoint, given a set of ordered pairs (horizontal and vertical lines)* • Computes and interprets distance, given a set of ordered pairs (horizontal and vertical lines)*	• Determines the new coordinates of a transformed geometric figure • Determines the distance between two points* • Determines the midpoint of a line on a coordinate grid* • Determines the figure when plotting ordered pairs • Computes and interprets the midpoint, given a set of ordered pairs (horizontal and vertical lines)* • Computes and interprets distance, given a set of ordered pairs (horizontal and vertical lines)*
New Vocabulary: arc, center, central angle, congruent side, equilateral, interior angle, isosceles triangle, long, midpoint, obtuse triangle, right triangle, scalene triangle, sum of measures	*New Vocabulary:* acute triangle, chord, corresponding side, equiangular triangle, secant, square pyramid, tangent	*New Vocabulary:* adjacent angle, congruent triangle, construction, converse, infinite, transversal, x-axis, y-axis
New Signs and Symbols: ( ) order of operations, cm centimeter/centimetre, ' feet, " inches, m meter/metre, − negative number, parallel symbol, π pi, : ratio, × multiplication, = is equal to, Δ triangle	*New Signs and Symbols:* congruent segment symbol, ft feet, in. inch, ≅ is congruent to	*New Signs and Symbols:* + addition, < less than, m measure of angle, → ray symbol, square root symbol

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Subject: Mathematics
Goal Strand: Geometry
RIT Score Range: 241 - 250

Skills and Concepts to Enhance 231 - 240	Skills and Concepts to Develop 241 - 250	Skills and Concepts to Introduce 251 - 260
Describing Figures	**Describing Figures**	**Describing Figures**
• Determines which lines are perpendicular (analysis)* • Identifies and measures straight angles • Identifies and determines a missing angle measure in corresponding, vertical, and alternate exterior/interior angles* • Identifies parts of a right triangle (legs, hypotenuse, angles)* • Recognizes the interior angle relationships of triangles • Classifies isosceles triangles • Classifies scalene triangles* • Identifies properties of circles • Compares polygons by properties • Classifies square pyramids by their properties (e.g., base shape, lateral surface shape, vertices)* • Classifies rectangular pyramids by their properties (e.g., base shape, lateral surface shape, vertices)*	• Identifies the converse or inverse of a conditional statement* • Identifies properties of congruent angles* • Identifies and determines missing angle measures for complementary angles • Uses properties of angles and figures to solve algebraic problems* • Identifies and determines a missing angle measure in corresponding, vertical, and alternate exterior/interior angles* • Defines angles using properties (e.g., acute, obtuse, right, straight, reflex)* • Identifies corresponding and alternate exterior/interior angles • Recognizes that the sum of the measures of two sides of a triangle must be greater than the measure of the third side* • Recognizes the exterior angle relationships of triangles* • Classifies right triangles by defining properties* • Identifies and names a rhombus* • Identifies symmetry of a sphere*	• Constructs conditional statements (e.g., If..., then...)* • Draws a simple valid conclusion from a given if ... then statement and a minor premise* • Uses counterexamples to show that an assertion is false • Uses reasoning to verify properties of parallel and perpendicular lines • Defines the properties or relationships between planes, including parallel, perpendicular, and intersecting planes and their angles of incidence* • Identifies properties of congruent angles* • Uses properties of angles and figures to solve algebraic problems* • Identifies corresponding and alternate exterior/interior angles • Uses properties of angles to solve mathematical problems* • Recognizes that the sum of the measures of two sides of a triangle must be greater than the measure of the third side* • Recognizes and uses medians in triangles* • Recognizes the exterior angle relationships of triangles* • Classifies right triangles by defining properties* • Solves problems involving properties of triangles • Identifies and names a rhombus* • Uses sums of interior/exterior angles to identify polygons • Uses number of sides to find angle measures of polygons • Classifies polygons by properties
Spatial Relationships and Transformations	**Spatial Relationships and Transformations**	**Spatial Relationships and Transformations**
• Identifies properties of congruent triangles* • Solves problems involving properties of congruent triangles • Uses similarity to solve problems using scale drawings • Explores maps and relates them to measurements of	• Constructs congruent figures* • Identifies properties of similar figures*	• Verifies congruency of triangles using ASA, SAS, SSS, or AAS • Solves problems involving similar polygons (not triangles) • Solves problems involving properties of similar

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		triangles (e.g., using geometric mean, Triangle Proportionality Theorem)
real distances, using proportional reasoning • Determines an appropriate scale for representing an object in a scale drawing* • Uses similar triangles to construct ratios and solve for a missing side • Identifies geometric transformations (dilations)		• Uses picture representations to identify corresponding parts of symmetric plane figures* • Uses picture representations to identify symmetry of plane figures with respect to a point or line • Determines whether a given pattern or polygon will tessellate*
Coordinate Systems	**Coordinate Systems**	**Coordinate Systems**
• Graphs ordered pairs in all quadrants • Computes and interprets the midpoint, given a set of ordered pairs (horizontal and vertical lines)* • Computes and interprets distance, given a set of ordered pairs (horizontal and vertical lines)*	• Determines the new coordinates of a transformed geometric figure • Determines the distance between two points* • Determines the midpoint of a line on a coordinate grid* • Determines the figure when plotting ordered pairs • Computes and interprets the midpoint, given a set of ordered pairs (horizontal and vertical lines)* • Computes and interprets distance, given a set of ordered pairs (horizontal and vertical lines)*	• Determines symmetry with respect to a point or line of a figure under transformation* • Determines the midpoint of a line on a coordinate grid* • Determines an endpoint of a line segment on a coordinate grid, given the midpoint and the other endpoint
New Vocabulary: acute triangle, chord, corresponding side, equiangular triangle, secant, square pyramid, tangent	*New Vocabulary:* adjacent angle, congruent triangle, construction, converse, infinite, transversal, x-axis, y-axis	*New Vocabulary:* collinear, exterior angle, line symmetry, point symmetry, regular hexagon, regular pentagon, rotational symmetry
New Signs and Symbols: congruent segment symbol, ft feet, in. inch, $\cong$ is congruent to	*New Signs and Symbols:* + addition, < less than, m measure of angle, → ray symbol, square root symbol	*New Signs and Symbols:* AAA angle angle angle, AAS angle angle side, ASA angle side angle, parallel line arrow markers, SAS side angle side, ~ similar to, SSA side side angle, SSS side side side, − subtraction, ° degrees

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Subject: Mathematics
Goal Strand: Geometry
RIT Score Range: 251 - 260

Skills and Concepts to Enhance 241 - 250	Skills and Concepts to Develop 251 - 260	Skills and Concepts to Introduce 261 - 270
Describing Figures	**Describing Figures**	**Describing Figures**
• Identifies the converse or inverse of a conditional statement* • Identifies properties of congruent angles* • Identifies and determines missing angle measures for complementary angles • Uses properties of angles and figures to solve algebraic problems* • Identifies and determines a missing angle measure in corresponding, vertical, and alternate exterior/interior angles* • Defines angles using properties (e.g., acute, obtuse, right, straight, reflex)* • Identifies corresponding and alternate exterior/interior angles • Recognizes that the sum of the measures of two sides of a triangle must be greater than the measure of the third side* • Recognizes the exterior angle relationships of triangles* • Classifies right triangles by defining properties* • Identifies and names a rhombus* • Identifies symmetry of a sphere*	• Constructs conditional statements (e.g., If..., then...)* • Draws a simple valid conclusion from a given if ... then statement and a minor premise* • Uses counterexamples to show that an assertion is false • Uses reasoning to verify properties of parallel and perpendicular lines • Defines the properties or relationships between planes, including parallel, perpendicular, and intersecting planes and their angles of incidence* • Identifies properties of congruent angles* • Uses properties of angles and figures to solve algebraic problems* • Identifies corresponding and alternate exterior/interior angles • Uses properties of angles to solve mathematical problems* • Recognizes that the sum of the measures of two sides of a triangle must be greater than the measure of the third side* • Recognizes and uses medians in triangles* • Recognizes the exterior angle relationships of triangles* • Classifies right triangles by defining properties* • Solves problems involving properties of triangles • Identifies and names a rhombus* • Uses sums of interior/exterior angles to identify polygons • Uses number of sides to find angle measures of polygons • Classifies polygons by properties	• Identifies the contrapositive of a conditional statement* • Uses properties of angles to solve mathematical problems* • Identifies the number of diagonals of regular polygons using the formula* • Determines sine of an angle in a given right triangle • Determines cosine of an angle in a given right triangle* • Determines tangent of an angle in a given triangle
Spatial Relationships and Transformations	**Spatial Relationships and Transformations**	**Spatial Relationships and Transformations**
• Constructs congruent figures* • Identifies properties of similar figures*	• Verifies congruency of triangles using ASA, SAS, SSS, or AAS • Solves problems involving similar polygons (not triangles) • Solves problems involving properties of similar	

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	triangles (e.g., using geometric mean, Triangle Proportionality Theorem) • Uses picture representations to identify corresponding parts of symmetric plane figures* • Uses picture representations to identify symmetry of plane figures with respect to a point or line • Determines whether a given pattern or polygon will tessellate*	
Coordinate Systems	**Coordinate Systems**	**Coordinate Systems**
• Determines the new coordinates of a transformed geometric figure • Determines the distance between two points* • Determines the midpoint of a line on a coordinate grid* • Determines the figure when plotting ordered pairs • Computes and interprets the midpoint, given a set of ordered pairs (horizontal and vertical lines)* • Computes and interprets distance, given a set of ordered pairs (horizontal and vertical lines)*	• Determines symmetry with respect to a point or line of a figure under transformation* • Determines the midpoint of a line on a coordinate grid* • Determines an endpoint of a line segment on a coordinate grid, given the midpoint and the other endpoint	
New Vocabulary: adjacent angle, congruent triangle, construction, converse, infinite, transversal, x-axis, y-axis	*New Vocabulary:* collinear, exterior angle, line symmetry, point symmetry, regular hexagon, regular pentagon, rotational symmetry	*New Vocabulary:* cosecant, cosine, decagon, sine, trigonometric function, trigonometric relationship
New Signs and Symbols: + addition, < less than, m measure of angle, → ray symbol, square root symbol	*New Signs and Symbols:* AAA angle angle angle, AAS angle angle side, ASA angle side angle, parallel line arrow markers, SAS side angle side, ~ similar to, SSA side side angle, SSS side side side, − subtraction, ° degrees	*New Signs and Symbols:* cos cosine, sin sine, tan tangent

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Subject: Mathematics
Goal Strand: Geometry
RIT Score Range: 261 - 270

Skills and Concepts to Enhance 251 - 260	Skills and Concepts to Develop 261 - 270	Skills and Concepts to Introduce Above 270
Describing Figures	**Describing Figures**	**Describing Figures**
• Constructs conditional statements (e.g., If..., then...)* • Draws a simple valid conclusion from a given if ... then statement and a minor premise* • Uses counterexamples to show that an assertion is false • Uses reasoning to verify properties of parallel and perpendicular lines • Defines the properties or relationships between planes, including parallel, perpendicular, and intersecting planes and their angles of incidence* • Identifies properties of congruent angles* • Uses properties of angles and figures to solve algebraic problems* • Identifies corresponding and alternate exterior/interior angles • Uses properties of angles to solve mathematical problems* • Recognizes that the sum of the measures of two sides of a triangle must be greater than the measure of the third side* • Recognizes and uses medians in triangles* • Recognizes the exterior angle relationships of triangles* • Classifies right triangles by defining properties* • Solves problems involving properties of triangles • Identifies and names a rhombus* • Uses sums of interior/exterior angles to identify polygons • Uses number of sides to find angle measures of polygons • Classifies polygons by properties	• Identifies the contrapositive of a conditional statement* • Uses properties of angles to solve mathematical problems* • Identifies the number of diagonals of regular polygons using the formula* • Determines sine of an angle in a given right triangle • Determines cosine of an angle in a given right triangle* • Determines tangent of an angle in a given triangle	• Identifies the number of diagonals of regular polygons using the formula*
Spatial Relationships and Transformations	**Spatial Relationships and Transformations**	**Spatial Relationships and Transformations**
• Verifies congruency of triangles using ASA, SAS, SSS, or AAS • Solves problems involving similar polygons (not triangles) • Solves problems involving properties of similar		

WI 3.2.1
* Both data from test items and review by NWEA curriculum specialists are used to place learning continuum statements into appropriate RIT ranges.
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triangles (e.g., using geometric mean, Triangle Proportionality Theorem) • Uses picture representations to identify corresponding parts of symmetric plane figures* • Uses picture representations to identify symmetry of plane figures with respect to a point or line • Determines whether a given pattern or polygon will tessellate*		
Coordinate Systems	**Coordinate Systems**	**Coordinate Systems**
• Determines symmetry with respect to a point or line of a figure under transformation* • Determines the midpoint of a line on a coordinate grid* • Determines an endpoint of a line segment on a coordinate grid, given the midpoint and the other endpoint		
New Vocabulary: collinear, exterior angle, line symmetry, point symmetry, regular hexagon, regular pentagon, rotational symmetry	*New Vocabulary:* cosecant, cosine, decagon, sine, trigonometric function, trigonometric relationship	*New Vocabulary:* none
New Signs and Symbols: AAA angle angle angle, AAS angle angle side, ASA angle side angle, parallel line arrow markers, SAS side angle side, ~ similar to, SSA side side angle, SSS side side side, – subtraction, ° degrees	*New Signs and Symbols:* cos cosine, sin sine, tan tangent	*New Signs and Symbols:* none

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Subject: Mathematics
Goal Strand: Geometry
RIT Score Range: Above 270

Skills and Concepts to Enhance 261 - 270	Skills and Concepts to Develop Above 270
Describing Figures	**Describing Figures**
• Identifies the contrapositive of a conditional statement* • Uses properties of angles to solve mathematical problems* • Identifies the number of diagonals of regular polygons using the formula* • Determines sine of an angle in a given right triangle • Determines cosine of an angle in a given right triangle* • Determines tangent of an angle in a given triangle	• Identifies the number of diagonals of regular polygons using the formula*
Spatial Relationships and Transformations	**Spatial Relationships and Transformations**
Coordinate Systems	**Coordinate Systems**
New Vocabulary: cosecant, cosine, decagon, sine, trigonometric function, trigonometric relationship	*New Vocabulary:* none
New Signs and Symbols: cos cosine, sin sine, tan tangent	*New Signs and Symbols:* none

WI 3.2.1
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