

MathematicsGoal: Geometry

RIT Score Range: < 161 Statements Last Updated: Aug 4, 2014

Skills and Concepts to Develop (50% Probability*) < 161	Skills and Concepts to Introduce (27% Probability*) 161 - 170
Geometric Measurement and Relationships	Geometric Measurement and Relationships
Identifies and names a circle	Compares objects (shorter, longer)
Identifies spatial sense concepts (e.g., outside, inside, between, over, under, above, below, behind, in front, middle)	Estimates and measures length of an object to the nearest inch using a picture of a ruler
	Measures length with customary measures to the inch mark
	Measures length with metric measures to the centimeter mark
	Identifies and names a triangle
	Identifies and names a square
	Identifies and names a rectangle
	Identifies sides and vertices of polygons
	Identifies and names a cone
	Compares open and closed figures
	Sorts solid figures and objects according to attributes
	Identifies position of shapes (e.g., inside, outside, between)
Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig
Identifies figures that are the same size and shape	Identifies figures that are the same size and shape
New Vocabulary: None	New Vocabulary: corner, flat
New Signs and Symbols: None	New Signs and Symbols: None

Explanatory Notes



Mathematics

Goal: Geometry

RIT Score Range: 161 - 170 Statements Last Updated: Aug 4, 2014

Skills and Concepts to Enhance (73% Probability*) < 161	Skills and Concepts to Develop (50% Probability*) 161 - 170	Skills and Concepts to Introduce (27% Probability*) 171 - 180
Geometric Measurement and Relationships	Geometric Measurement and Relationships	Geometric Measurement and Relationships
Identifies and names a circle Identifies anglish some concepts (a.g. cutside incide between over	Compares objects (shorter, longer) Estimates and measures length of an object to the nearest inch using	Estimates and measures length of an object to the nearest centimeter using a picture of a ruler
 Identifies spatial sense concepts (e.g., outside, inside, between, over, under, above, below, behind, in front, middle) 	a picture of a ruler	Measures length with customary measures to the inch mark
	Measures length with customary measures to the inch mark	Determines the area of irregular shapes by counting square units
	Measures length with metric measures to the centimeter mark	Identifies and names a triangle
	Identifies and names a triangle	Identifies and names a square
	Identifies and names a square	Identifies and names a cube
	Identifies and names a rectangle	Recognizes geometric shapes in real-world objects
	Identifies sides and vertices of polygons	
	Identifies and names a cone	
	Compares open and closed figures	
	Sorts solid figures and objects according to attributes	
	Identifies position of shapes (e.g., inside, outside, between)	
Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig
• Identifies figures that are the same size and shape	Identifies figures that are the same size and shape	Identifies figures that are similar
New Vocabulary: None	New Vocabulary: corner, flat	New Vocabulary: geometric figure, similar
New Signs and Symbols: None	New Signs and Symbols: None	New Signs and Symbols: None

Explanatory Notes

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Mathematics

Goal: Geometry

RIT Score Range: 171 - 180 Statements Last Updated: Aug 4, 2014

Skills and Concepts to Enhance (73% Probability*) 161 - 170	Skills and Concepts to Develop (50% Probability*) 171 - 180	Skills and Concepts to Introduce (27% Probability*) 181 - 190
Geometric Measurement and Relationships	Geometric Measurement and Relationships	Geometric Measurement and Relationships
Compares objects (shorter, longer)	Estimates and measures length of an object to the nearest centimeter	Selects and uses the appropriate type and size of unit in customary
• Estimates and measures length of an object to the nearest inch using a	using a picture of a ruler	system (length)
picture of a ruler	Measures length with customary measures to the inch mark	Measures length with customary measures to the half-inch mark
 Measures length with customary measures to the inch mark 	Determines the area of irregular shapes by counting square units	Uses a variety of non-standard units to measure the same length
 Measures length with metric measures to the centimeter mark 	Identifies and names a triangle	Determines more capacity or less capacity
Identifies and names a triangle	Identifies and names a square	Determines the perimeter of a figure where all sides are labeled
Identifies and names a square	Identifies and names a cube	Determines the area of irregular shapes by counting square units
Identifies and names a rectangle	Recognizes geometric shapes in real-world objects	Classifies polygons by sides and vertices
 Identifies sides and vertices of polygons 		Identifies and names a cube
Identifies and names a cone		Identifies and names a sphere
Compares open and closed figures		
 Sorts solid figures and objects according to attributes 		
• Identifies position of shapes (e.g., inside, outside, between)		
Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig
 Identifies figures that are the same size and shape 	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)
New Vocabulary: corner, flat	New Vocabulary: geometric figure, similar	New Vocabulary: estimation, millimeter, symmetry
New Signs and Symbols: None	New Signs and Symbols: None	New Signs and Symbols: None

Explanatory Notes



Mathematics

Goal: Geometry

RIT Score Range: 181 - 190 Statements Last Updated: Aug 4, 2014

Skills and Concepts to Enhance (73% Probability*) 171 - 180	Skills and Concepts to Develop (50% Probability*) 181 - 190	Skills and Concepts to Introduce (27% Probability*) 191 - 200
Geometric Measurement and Relationships	Geometric Measurement and Relationships	Geometric Measurement and Relationships
Estimates and measures length of an object to the nearest centimeter using a picture of a ruler	Selects and uses the appropriate type and size of unit in customary system (length)	Selects and uses the appropriate type and size of unit in customary system (length)
Measures length with customary measures to the inch mark	Measures length with customary measures to the half-inch mark	Determines the perimeter of a figure where all sides are labeled
• Determines the area of irregular shapes by counting square units	Uses a variety of non-standard units to measure the same length	Determines the perimeter of a figure where some sides are labeled
Identifies and names a triangle	Determines more capacity or less capacity	• Solves simple problems involving the perimeter of squares, rectangles,
• Identifies and names a square	Determines the perimeter of a figure where all sides are labeled	or triangles
Identifies and names a cube	Determines the area of irregular shapes by counting square units	Estimates the area of rectangles using square units
Recognizes geometric shapes in real-world objects	Classifies polygons by sides and vertices	Identifies lines
	Identifies and names a cube	Identifies parallel lines
	Identifies and names a sphere	Uses models to compare angles relative to right angles
	·	Identifies right angles
		Identifies corners (vertices) of cubes
		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
		Creates a new shape by combining different shapes, or identifies the different shapes that were used to make the original shape
		Explores maps and relates them to measurements of real distances, using the scale
Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig
Identifies figures that are similar	Identifies congruent figures	Identifies congruent figures
	Identifies figures that are similar	• Identifies congruent polygons and their corresponding sides and angles
	Identifies plane figures with line symmetry	Identifies plane figures with line symmetry
	Identifies transformations of plane figures (rotations/turns)	Identifies the number of lines of symmetry in plane figures
		Identifies transformations of plane figures (reflections/flips)
New Vocabulary: geometric figure, similar	New Vocabulary: estimation, millimeter, symmetry	New Vocabulary: face, intersect, large, parallel, vertical line
New Signs and Symbols: None	New Signs and Symbols: None	New Signs and Symbols: \$ dollar sign, ft feet, in. inch, m meter/metre, yd yard

Explanatory Notes

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Mathematics

Goal: Geometry

RIT Score Range: 191 - 200 Statements Last Updated: Aug 4, 2014

Skills and Concepts to Enhance (73% Probability*) 181 - 190	Skills and Concepts to Develop (50% Probability*) 191 - 200	Skills and Concepts to Introduce (27% Probability*) 201 - 210
Geometric Measurement and Relationships	Geometric Measurement and Relationships	Geometric Measurement and Relationships
Selects and uses the appropriate type and size of unit in customary system (length) Measures length with customary measures to the half-inch mark Uses a variety of non-standard units to measure the same length Determines more capacity or less capacity Determines the perimeter of a figure where all sides are labeled Determines the area of irregular shapes by counting square units Classifies polygons by sides and vertices Identifies and names a cube Identifies and names a sphere	Selects and uses the appropriate type and size of unit in customary system (length) Determines the perimeter of a figure where all sides are labeled Determines the perimeter of a figure where some sides are labeled Solves simple problems involving the perimeter of squares, rectangles, or triangles Estimates the area of rectangles using square units Identifies lines Identifies parallel lines Identifies right angles Identifies corners (vertices) of cubes Identifies and names a cylinder Identifies and names a sphere Sorts 2-D shapes and objects according to their attributes Creates a new shape by combining different shapes, or identifies the different shapes that were used to make the original shape Explores maps and relates them to measurements of real distances, using the scale	Uses the appropriate unit of measure for length Knows the approximate size of a yard Measures length to the nearest centimeter Knows the approximate size of a pound Knows the approximate size of a gram Knows the approximate size of a gram Stimates the measure of acute, right, and obtuse angles using 45 and 90 degrees as referents Determines the perimeter of a figure where some sides are labeled Describes the change in area of a triangle when 1 dimension of an object is altered (metric units) Estimates the area of rectangles using square units Determines the area of irregular shapes with partial square units Identifies situations where it is appropriate to calculate area Estimates and finds volume of a figure using cubic units Uses basic indirect methods to estimate measurements (grids for area of irregular figures) Identifies parallel lines Uses models to compare angles relative to right angles Identifies and names a parallelogram Identifies and names a hexagon Classifies polygons by number of sides Classifies polygons by sides and angles Identifies corners (vertices) of cubes 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
Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig
 Identifies congruent figures Identifies figures that are similar Identifies plane figures with line symmetry Identifies transformations of plane figures (rotations/turns) 	Identifies congruent figures Identifies congruent polygons and their corresponding sides and angles Identifies plane figures with line symmetry Identifies the number of lines of symmetry in plane figures Identifies transformations of plane figures (reflections/flips)	Identifies congruent polygons and their corresponding sides and angles Classifies plane figures by the number of lines of symmetry
New Vocabulary: estimation, millimeter, symmetry	New Vocabulary: face, intersect, large, parallel, vertical line	New Vocabulary: cubic centimeter, cubic unit, edge, larger, parallel line,
New Signs and Symbols: None	New Signs and Symbols: \$ dollar sign, ft feet, in. inch, m meter/metre, yd yard	regular polygon, trapezoid New Signs and Symbols: cm centimeter/centimetre, ° degrees, g gram

Explanatory Notes

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Mathematics

Goal: Geometry

RIT Score Range: 201 - 210 Statements Last Updated: Aug 4, 2014

Skills and Concepts to Enhance (73% Probability*) 191 - 200	Skills and Concepts to Develop (50% Probability*) 201 - 210	Skills and Concepts to Introduce (27% Probability*) 211 - 220
Geometric Measurement and Relationships	Geometric Measurement and Relationships	Geometric Measurement and Relationships
Selects and uses the appropriate type and size of unit in customary system (length)	Uses the appropriate unit of measure for length	Uses the appropriate unit of measure for length Manual the appropriate size of a millimate.
Determines the perimeter of a figure where all sides are labeled	Knows the approximate size of a yard	Knows the approximate size of a millimeter
Determines the perimeter of a figure where some sides are labeled	Measures length to the nearest centimeter Knows the approximate size of a pound	 Selects and uses the appropriate type and size of unit in metric system (mass)
Solves simple problems involving the perimeter of squares, rectangles,	Knows the approximate size of a gram	Solves simple problems involving capacity
or triangles • Estimates the area of rectangles using square units	Estimates the measure of acute, right, and obtuse angles using 45 and 90 degrees as referents	• Estimates the measure of acute, right, and obtuse angles using 45 and 90 degrees as referents
Identifies lines	Determines the perimeter of a figure where some sides are labeled	Measures angles using a protractor
Identifies parallel lines	Describes the change in area of a triangle when 1 dimension of an	Determines the perimeter of a figure using non-standard units
Uses models to compare angles relative to right angles	object is altered (metric units)	Solves problems involving the perimeter of squares, rectangles, or
Identifies right angles	Estimates the area of rectangles using square units	triangles
Identifies corners (vertices) of cubes	Determines the area of irregular shapes with partial square units	 Finds the perimeter of a polygon using a formula
Identifies the number of faces on rectangular prisms	• Identifies situations where it is appropriate to calculate area	 Describes the change in perimeter when dimensions of an object are altered
Identifies and names a cylinder	Estimates and finds volume of a figure using cubic units	Determines the diameter, given the radius, and vice versa
Identifies and names a sphereSorts 2-D shapes and objects according to their attributes	 Uses basic indirect methods to estimate measurements (grids for area of irregular figures) 	Describes the change in area of a triangle when 1 dimension of an object is altered (metric units)
Creates a new shape by combining different shapes, or identifies the	Identifies parallel lines	Determines the area of irregular shapes with partial square units
different shapes that were used to make the original shape	Uses models to compare angles relative to right angles	Estimates and finds volume of a figure using cubic units
Explores maps and relates them to measurements of real distances, using the scale	Identifies and names a parallelogram Identifies and names a trapezoid	Calculates the volume of a rectangular prism, and converts to a different measurement scale (customary units)
	Identifies and names a hexagon	Identifies rays
	Classifies polygons by number of sides	Identifies properties of angles
	Classifies polygons by sides and angles	Identifies acute angles
	• Identifies corners (vertices) of cubes	Identifies obtuse angles
	• Classifies cubes by their properties (e.g., edges with equal lengths,	Identifies and names a trapezoid
	faces with equal areas and congruent shapes, right angle corners)	Identifies and names a rhombus
	Identifies a cube from a net	Identifies and names a quadrilateral
	Identifies and names a cylinder	Classifies polygons by type of angle
		Identifies corners (vertices) of cubes
		Identifies the net which makes a cube-like (open box) figure
		Identifies the number of edges on rectangular prisms
		Predicts and verifies the effects of combining or subdividing basic
		shapes
		Determines an appropriate scale for representing a distance on a map
Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig
Identifies congruent figures	• Identifies congruent polygons and their corresponding sides and angles	Identifies similar and congruent triangles
• Identifies congruent polygons and their corresponding sides and angles	Classifies plane figures by the number of lines of symmetry	Uses similar figures to construct ratios and solve for a missing side
		Identifies geometric transformations (rotations)

Explanatory Note



Mathematics

Goal: Geometry

RIT Score Range: 201 - 210 Statements Last Updated: Aug 4, 2014

Skills and Concepts to Enhance (73% Probability*) 191 - 200	Skills and Concepts to Develop (50% Probability*) 201 - 210	Skills and Concepts to Introduce (27% Probability*) 211 - 220
Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig
Identifies the number of lines of symmetry in plane figuresIdentifies transformations of plane figures (reflections/flips)		Identifies geometric transformations (translations)
New Vocabulary: face, intersect, large, parallel, vertical line	New Vocabulary: cubic centimeter, cubic unit, edge, larger, parallel line,	New Vocabulary: acute angle, congruent angle, cord, dilation, obtuse
New Signs and Symbols: \$ dollar sign, ft feet, in. inch, m meter/metre, yd	regular polygon, trapezoid	angle, straight angle, transformation
yard	New Signs and Symbols: cm centimeter/centimetre, ° degrees, g gram	New Signs and Symbols: ∠ 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

Explanatory Notes



Mathematics

Goal: Geometry

211 - 220 RIT Score Range: Statements Last Updated: Aug 4, 2014

Knows the approximate size of a yard Knows the approximate size of a pound Knows the approximate size of a pound Knows the approximate size of a gram Knows the approximate size of	Skills and Concepts to Enhance (73% Probability*) 201 - 210	Skills and Concepts to Develop (50% Probability*) 211 - 220	Skills and Concepts to Introduce (27% Probability*) 221 - 230
Notices the approximate size of a yourd Notices the approximate size of a pound Notices the approximate size of a pound Notices the approximate size of a pound Notices the approximate size of a grain season of acute, right, and obtuse angles using 45 and 50 degrees as referents Obsertises the change in rare of a figure where some sides are labeled Posecribes the change in rare of a triangle when 1 dimension of an object is attered (mericu units) Determines the perimeter of a figure using ponsetandard units Obsertises the area of recipilar shapes with partial square units Notices included in the perimeter of a figure using non-standard units Obsertises the change in area of a triangle when 1 dimension of an object is attered (mericu units) Obtermines the perimeter of a figure using on-standard units Obsertises the change in spent and the stream of regular spapes with partial square units Obtermines the perimeter of a figure using on-standard units Obsertises the change in perimeter of a figure using on-standard units Obsertises the change in perimeter of a figure using on-standard units Obtermines the perimeter of a figure using on-standard units Obtermines the perimeter of a figure using on-standard units Obtermines the perimeter of a figure using on-standard units Obtermines the perimeter of a figure using on-standard units Obtermines the perimeter of a figure using on-standard units Obtermines the perimeter of a figure using on-standard units Obtermines the perimeter of a figure using on-standard units Obtermines the perimeter of a figure using on-standard units Obtermines the area of regular shapes with primal square units Obtermines the area of regular shapes units Obtermines the area of regular shapes units Obtermines the area of a triangle when 1 dimension of an object a triangle of the perimeter of a perimeter o	Geometric Measurement and Relationships	Geometric Measurement and Relationships	Geometric Measurement and Relationships
Neasures length to the nearest certimeter Knows the approximate size of a gram Solves grapher involving the perimeter of a figure using contents of a bidding of the perimeter of a figure using contents of a sile of (mortic units) Solves grapher involving the perimeter of a figure using contents of a sile of (mortic units) Solves grapher involving the perimeter of a figure using cubic units Solves grapher involving the perimeter of a figure using cubic units Solves grapher involving the perimeter of a figure using cubic units Solves grapher involving the perimeter of a figure using cubic units Solves grapher involving the perimeter of a figure using cubic units Solves grapher involving the perimeter of a figure using cubic units Solves grapher involving the perimeter of a figure using cubic units Solves grapher involving the perimeter of a figure using cubic units Solves grapher involving the perimeter of a figure using on the perimeter of a figure using on the perimeter of a figure using on the perimeter of a polygon using a formula Solves grapher involving the perimeter of a figure using on the perimeter of a figure using units Solves grapher involving the perimeter of a figure using on the pe	Uses the appropriate unit of measure for length	Uses the appropriate unit of measure for length	Determines coordinates of geometric figures in the first quadrant
*Knows the approximate size of a pound *Knows the approximate size of a groun *Knows the approximate size of a groun *Softwas the measure of acute, right, and obtuse angles using 45 and 50 degrees as referents *Softwas problems involving capacity *Estimates the measure of acute, right, and obtuse angles using 45 and 50 degrees as referents *Neasures angles using a protractor *Neasures and rinegats analyse protractive its appropriate scale for representing on object are altered *Neasures and rinegate analyse *Neasur	Knows the approximate size of a yard	Knows the approximate size of a millimeter	Measures length to the nearest millimeter
Knows the approximate size of a gram Estimates the measure of actue, right, and obtuse angles using 45 and 50 degrees as referents Determines the perimeter of a figure where some sides are labeled object is altered (metric units) Describes the change in area of rectangles using equare units Determines the perimeter of a fligure where some sides are labeled object is altered (metric units) Determines the area of irregular space with partial square units Determines the area of irregular shapes with partial square units Determines the area of irregular space with partial square units Subsess indirect methods to estimate measurements (grids for area of regular figures) Vises models to compare angles relative to right angles Identifies and names a parallelogram Classifies pobygons by mumber of sides Identifies and names a parallelogram Classifies cubes by their properties (e.g., edges with equal lengths, reace with equal areas and congruent shapes, right angle corners) Identifies a cube from a net Identifies a cube from a net Identifies a cube from a net Identifies and names a cylinder Identifies and names a cylinder Identifies and names a price of the compare angles relative to right angle corners) Identifies and names a price of the compare angles relative to right angles Identifies and names and possible of the compare angles relative to right angles Identifies and names and possible of the compare angles Identifies and names and possible of the compare angles Identifies and names and possible of the compare angles Identifies and names and possible of the compare angles Identifies and names and possible of the compare angles Identifies and names and possible of the compare angles Identifies and names and possible of the compare angles Identifies and names and possible of the compare angles Identifies and names and possible of the compare angles Identifies and names and possible of the c	Measures length to the nearest centimeter	Selects and uses the appropriate type and size of unit in metric system	Determines the perimeter of a figure using non-standard units
** Estimates the measure of acute, right, and obtuse angles using 45 and 50 degrees as referents of a figure where some sides are labeled **Describes the change in area of a triangle when 1 dimension of an object is altered (metric units) **Determines the perimeter of a figure when easure of acute, right, and obtuse angles using a protractor **Determines the perimeter of a figure using course of triangles using a protractor **Determines the area of irregular shapes with partial square units **Solves problems involving the perimeter of a squares, rectangles, or triangles interest metric of a polygon using a formula **Describes the change in perimeter of a polygon using a formula **Describes the change in perimeter of a polygon using a formula **Describes the change in perimeter of a polygon using a formula **Describes the change in perimeter of a polygon using a formula **Describes the change in perimeter of a polygon using a formula **Describes the change in perimeter of a polygon using a formula **Describes the change in perimeter of a polygon using a formula **Describes the change in perimeter of a polygon using a formula **Describes the change in perimeter of a polygon using a formula **Describes the change in perimeter of a polygon using a formula **Describes the change in perimeter of a polygon using a formula **Describes the change in perimeter of a polygon using a formula **Describes the change in perimeter of a polygon using a formula **Describes the change in perimeter of a polygon using a formula **Describes the change in perimeter of a polygon using a formula **Describes the change in perimeter of a polygon using a formula **Describes the change in perimeter of a polygon using a formula **Describes the change in perimeter of a polygon using a formula **Describes the change in perimeter of a polygon using a formula **Describes the change in perimeter of a polygon using a formula **Describes the change in perimeter of a polygon using a formula **Describes the change in perimeter of a polygon using a fo	Knows the approximate size of a pound		Solves problems involving the perimeter of squares, rectangles, or
So degrees as referents O deg	Knows the approximate size of a gram		
Determines the enhange in area of a triangle when 1 dimension of an object is altered (metric units) Determines the change in area of a triangle when 1 dimension of an object is altered (metric units) Determines the enhange in area of a triangle when 1 dimension of an object is altered (metric units) Determines the enhange in area of a triangle when 1 dimension of an object is altered (metric units) Determines the enhange in area of a triangle when 1 dimension of an object is altered (metric units) Determines the perimeter of a figure using cubic units Determines the perimeter of a figure using audit units Determines the perimeter of a figure using audit units Determines the perimeter of a figure using audit units Determines the perimeter of a figure using audit units Determines the perimeter of a figure using audit units Determines the perimeter of a figure using and the perimeter of a figure using audit units Determines the perimeter of a figure using audit units Determines the perimeter of a figure using and the perimeter of a figure using out the ordinary units object is altered (metric units) Determines the perimeter of a figure using and the perimeter of a figure using out the ordinary units object is altered (metric units) Determines the perimeter of a figure using and the perimeter of a figure using out the ordinary units object is altered (metric units) Determines the area of irregular shapes with partial square units Determines the diameter, given the radius, and vice versa Determines the perimeter of a flugure using out the ordinary units object is altered (metric units) Determines the liangle perimeter of a figure using out of the units) Determines the diameter, given the radius, and vice versa Determines the perimeter of a figure using out of the units) Determines the perimeter of a figure using out of the units) Determines the diameter, given the radius, and vice versa Determines the perimeter of a figure using out of the units) Determines the perimeter of a figure using o			 Solves problems involving the perimeter of irregular or complex shape Describes the change in perimeter when dimensions of an object are
Solves problems involving the perimeter of squares, rectangles, or triangles - Estimates the area of tregular shapes with partial square units - Ubetermines the area of irregular shapes with partial square units - Ubetermines the area of irregular shapes with partial square units - Ubetermines the area of irregular shapes with partial square units - Uses basic indired methods to estimate measurements (grids for area of irregular figures) - Ubetermines the area of irregular shapes with partial square units - Ubetermines the iameter, given the radius, and vice versa - Describes the change in perimeter when dimensions of an object are aftered - Determines the diameter, given the radius, and vice versa - Determines the diameter, given the radius, and vice versa - Determines the area of irregular shapes with partial square units - Ubetermines the area of irregular shapes with partial square units - Ubetermines the area of irregular shapes with partial square units - Ubetermines the area of irregular shapes with partial square units - Ubetermines the area of irregular shapes with partial square units - Ubetermines the volume of a rectangular prism, and converts to a different measurement scale (customary units) - Ubetermines the volume of a rectangular prism, and converts to a different measurement scale (customary units) - Ubetermines and names a phrappoid in the same and congruent shapes, right angle corners) - Identifies and names a rhombus - Identifies and names a cylinder - Identifies and names a rhombus - Identifies and names a rylinder	Determines the perimeter of a figure where some sides are labeled	Measures angles using a protractor	
- Estimates and finds volume of a figure using cubic units - Determines the area of rectangles using square units - Determines the area of rectangles using square units - Determines the area of rectangles using square units - Determines the area of rectangles using square units - Determines the area of rectangles using square units - Determines the area of rectangles using square units - Determines the area of rectangles using square units - Determines the area of rectangles of a polygon using a formula - Determines the area of a rectangle, given the area altered - Determines the area of a polygon using a formula - Determines the area of a rectangle using square units - Determines the area of a rectangle using square units - Determines the area of a rectangle using square units - Determines the area of a rectangle using square units - Determines the area of a rectangle using square units - Determines the area of irregular shapes (in the dampter, given the radius, and vice versa - Describes the change in permeter when dimensions of an object are altered - Determines the area of a rectangle, given the area altered - Determines the area of a rectangle, given the area altered - Determines the area of a rectangle using square units - Determines the area of a rectangle using square units - Determines the area of a rectangle using square units - Determines the area of a rectangle using square units - Determines the area of irregular shapes (customary units) - Determines the area of irregular shapes (customary units) - Determines the area of irregular shapes (customary units) - Determines the area of irregular shapes (customary units) - Determines the area of irregular shapes with partial square units - Determines the area of irregular shapes (customary units) - Determines and area of a triangle when 1 dimension of an object are altered - Determines and area of irregular shapes (customary units) - Determines and area of a triangle when 1 dimension of an object area of irregular shapes (customary units) - Determines and	Describes the change in area of a triangle when 1 dimension of an		Describes the change in area of a triangle when 1 dimension of an ability of the latest in alternal (matrix units).
Determines the area of irregular shapes with partial square units Determines the area of irregular shapes with partial square units Uses basic indirect methods to estimate measurements (grids for area of irregular figures) Uses models to compare angles relative to right angles Uses demanded and angles Uses models to compare angles relative to right angles Uses models to compare angles relative to right angles Uses models to compare angles relative to right angles Uses of the fittles angles Uses of the fittles angles U	· · · · · · · · · · · · · · · · · · ·		, ,
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- Identifies situations where it is appropriate to calculate area - Estimates and finds volume of a figure using cubic units - Uses basic indirect methods to estimate measurements (grids for area of irregular figures) - Uses making and indire volume of a figure using cubic units - Uses basic indirect methods to estimate measurements (grids for area of irregular figures) - Uses missel to compare angles relative to right angles - Uses models to compare angles relative to right angles - Uses models to compare angles relative to right angles - Use themities and names a trapezoid - Uses flies polygons by number of sides - Uses flies obuses of angles - Use themities and names a trapezoid - Use the site of a site of the trapezoid - Use the site of a site of the site of a site of the site of a site of trapezoid - Use the site of the site of a site of trapezoid - Use the site of the site of a site of trapezoid - Use the site of the site of a site of the site of a site of trapezoid - Use the site of the site of a site of trapezoid - Use the site of a site of trapezoid - Use the site of a site of trapezoid - Use the site of a site of the site of a site of a site of trapezoid - Use the site of a site of the site of a site of a site of trapezoid - Use the site of a site of the site of a site of a site of a site of a site of the site of a site of a site of trapezoid - Use the site of a site of the site of a site of a site of the site of a site of a site of the site of a		. , , , , ,	,
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different measurement scale (customary units) • Identifies and names a trapezoid • Identifies polygons by number of sides • Classifies polygons by number of sides • Classifies polygons by sides and angles • Identifies actue angles • Identifies and names a trapezoid • Identifies actue angles • Identifies and names a trapezoid • Identifies and names a quadrilateral • Identifies and names a quadrilateral • Identifies the net which makes a cube-like (open box) figure • Identifies the number of edges on rectangular prisms • Predicts and verifies the effects of combining or subdividing basic shapes • Determines an appropriate scale for representing a distance on a map • Congruence, Similarity, Right Triangles, & Trig • Identifies similar and congruent triangles • Identifies and pares a quadrilateral • Identifies the number of edges on rectangular prisms • Determines an appropriate scale for representing a distance on a map • Identifies the number of edges on rectangular prisms • Calculates the volume of a rectangular prism, different measurement scale (customary units) • Identifies rays • Identifies are perpendicular (analysis) • Identifies and determines missing angle measures for supp angles • Identifies and names a rhombus • Identifies and names a trapezoid • Identifies and names a rhombus • Identifies and names a quadrilateral • Identifies or presson by properties of quadrilateral • Identifies properties of quadrilaterals • Congruence, Similarity, Right Triangles, & Trig • Identifies properties of parallel and perpendicular lines	Identifies and names a parallelogram		Calculates the volume of rectangular solids
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• Classifies cubes by their properties (e.g., edges with equal lengths, faces with equal areas and congruent shapes, right angle corners) • Identifies and names a trapezoid • Identifies and names a cylinder • Identifies and names a quadrilateral • Identifies corners (vertices) of cubes • Identifies the net which makes a cube-like (open box) figure • Identifies the number of edges on rectangular prisms • Predicts and verifies the effects of combining or subdividing basic shapes • Determines an appropriate scale for representing a distance on a map • Congruence, Similarity, Right Triangles, & Trig • Identifies congruent polygons and their corresponding sides and angles • Identifies acute angles • Identifies acute angles • Identifies and names a triombus • Identifies and names a quadrilateral • Identifies and names a quadrilateral • Identifies and names a triombus • Identifies and names a triombus • Identifies and names a quadrilateral • Identifies and names a trombus • Identifies and names a trapezoid • Identifies and names a trapezoid • Identifies an		Identifies acute angles	
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• Identifies a cube from a net • Identifies and names a rhombus • Identifies and names a quadrilateral • Identifies and names a rhombus • Identifies and names a quadrilateral • Identifies and names a rhombus		Identifies and names a trapezoid	
• Identifies and names a quadrilateral • Identifies and names a quadrilateral • Classifies polygons by type of angle • Identifies corners (vertices) of cubes • Identifies the net which makes a cube-like (open box) figure • Identifies the number of edges on rectangular prisms • Predicts and verifies the effects of combining or subdividing basic shapes • Determines an appropriate scale for representing a distance on a map * Uses similarity to solve problems using scale drawings • Determines an appropriate scale for representing and their corresponding sides and angles • Identifies and names a rhombus • Identifies and names a quadrilateral • Identifies and names a quadrilateral • Identifies and names a rhombus • Identifies and names a quadrilateral • Identifies and names a rhombus • Identifies and names a quadrilateral • Identifies and names a rhombus • Identifies and names a quadrilateral • Identifies properties of quadrilateral • Identifies properties of quadrilateral • Identifies properties of parallel and perpendicular lines		Identifies and names a rhombus	
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• Identifies the net which makes a cube-like (open box) figure • Identifies the number of edges on rectangular prisms • Predicts and verifies the effects of combining or subdividing basic shapes • Determines an appropriate scale for representing a distance on a map • Determines an appropriate scale for representing a distance on a map • Determines an appropriate scale for representing a distance on a map • Determines an appropriate scale for representing an object drawing Congruence, Similarity, Right Triangles, & Trig • Identifies properties of quadrilaterals • Classifies polygons by type of angle • Identifies the number of edges on rectangular prisms • Uses similarity to solve problems using scale drawings • Determines an appropriate scale for representing an object drawing Congruence, Similarity, Right Triangles, & Trig • Identifies properties of quadrilaterals • Classifies polygons by type of angle • Identifies the number of edges on rectangular prisms • Uses similarity to solve problems using scale drawings • Determines an appropriate scale for representing an object drawing Congruence, Similarity, Right Triangles, & Trig • Identifies properties of parallel and perpendicular lines		Identifies corners (vertices) of cubes	·
• Identifies the number of edges on rectangular prisms • Predicts and verifies the effects of combining or subdividing basic shapes • Determines an appropriate scale for representing a distance on a map • Determines an appropriate scale for representing a distance on a map • Determines an appropriate scale for representing an object drawing Congruence, Similarity, Right Triangles, & Trig • Identifies congruent polygons and their corresponding sides and angles • Identifies similar and congruent triangles • Identifies properties of parallel and perpendicular lines		 Identifies the net which makes a cube-like (open box) figure 	
• Predicts and verifies the effects of combining or subdividing basic shapes • Identifies the number of edges on rectangular prisms • Identifies the number of edges on rectangular prisms • Uses similarity to solve problems using scale drawings • Determines an appropriate scale for representing a distance on a map • Determines an appropriate scale for representing an object drawing Congruence, Similarity, Right Triangles, & Trig • Identifies congruence, Similarity, Right Triangles, & Trig • Identifies the number of edges on rectangular prisms • Uses similarity to solve problems using scale drawings • Determines an appropriate scale for representing an object drawing • Congruence, Similarity, Right Triangles, & Trig • Identifies congruent polygons and their corresponding sides and angles • Identifies the number of edges on rectangular prisms • Uses similarity to solve problems using scale drawings • Determines an appropriate scale for representing a distance on a map • Determines an appropriate scale for representing a distance on a map • Determines an appropriate scale for representing a distance on a map			l · · · · · ·
Determines an appropriate scale for representing a distance on a map • Uses similarity to solve problems using scale drawings • Determines an appropriate scale for representing a distance on a map • Determines an appropriate scale for representing an object drawing Congruence, Similarity, Right Triangles, & Trig • Identifies congruent polygons and their corresponding sides and angles • Identifies similar and congruent triangles • Identifies properties of parallel and perpendicular lines			
Determines an appropriate scale for representing an object drawing Congruence, Similarity, Right Triangles, & Trig Identifies congruent polygons and their corresponding sides and angles Identifies similar and congruent triangles Identifies properties of parallel and perpendicular lines		•	
• Identifies congruent polygons and their corresponding sides and angles • Identifies similar and congruent triangles • Identifies properties of parallel and perpendicular lines		- Determines an appropriate scale for representing a distance on a map	Determines an appropriate scale for representing an object in a scale
	Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig
• Classifies plane figures by the number of lines of symmetry • Uses similar figures to construct ratios and solve for a missing side • Recognizes the interior angle relationships of triangles	Identifies congruent polygons and their corresponding sides and angles	Identifies similar and congruent triangles	Identifies properties of parallel and perpendicular lines
1.000g/in200 till interior dright of the inte	Classifies plane figures by the number of lines of symmetry	Uses similar figures to construct ratios and solve for a missing side	Recognizes the interior angle relationships of triangles



Mathematics

Goal: Geometry

RIT Score Range: 211 - 220 Statements Last Updated: Aug 4, 2014

Skills and Concepts to Enhance (73% Probability*) 201 - 210	Skills and Concepts to Develop (50% Probability*) 211 - 220	Skills and Concepts to Introduce (27% Probability*) 221 - 230
Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig
	Identifies geometric transformations (rotations) Identifies geometric transformations (translations)	 Uses similar figures to construct ratios and solve for a missing side Uses similar triangles to construct ratios and solve for a missing side Identifies geometric transformations (rotations) Identifies geometric transformations (translations) Identifies geometric transformations (reflections)
New Vocabulary: cubic centimeter, cubic unit, edge, larger, parallel line,	New Vocabulary: acute angle, congruent angle, cord, dilation, obtuse	New Vocabulary: cubic meter, interior angle, long, scale factor
regular polygon, trapezoid	angle, straight angle, transformation	New Signs and Symbols: () ordered pair, ´ feet, h height, ˝ inches, = is equal to, = is equal to, I length, × multiplication, : ratio, V volume, w wid
New Signs and Symbols: cm centimeter/centimetre, ° degrees, g gram	New Signs and Symbols: ∠ 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	

Explanatory Notes



Mathematics

Goal: Geometry

RIT Score Range: 221 - 230 Statements Last Updated: Aug 4, 2014

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
Uses the appropriate unit of measure for length	Determines coordinates of geometric figures in the first quadrant	Measures length to the nearest millimeter
Knows the approximate size of a millimeter	Measures length to the nearest millimeter	Solves problems involving the perimeter of irregular or complex shapes
• Selects and uses the appropriate type and size of unit in metric system (mass)	Determines the perimeter of a figure using non-standard units Solves problems involving the perimeter of squares, rectangles, or	Describes the change in perimeter when dimensions of an object are altered
 Solves simple problems involving capacity 	triangles	Identifies the formula for perimeter with a variable
• Estimates the measure of acute, right, and obtuse angles using 45 and 90 degrees as referents	 Solves problems involving the perimeter of irregular or complex shapes Describes the change in perimeter when dimensions of an object are 	Determines the circumference when given the diameter or radius (or vice versa)
Measures angles using a protractor	altered	Determines the circumference when given the area of a circle (or vice)
Determines the perimeter of a figure using non-standard units	Describes the change in area of a triangle when 1 dimension of an	versa)
• Solves problems involving the perimeter of squares, rectangles, or	object is altered (metric units)	Knows the relationship between radius, diameter, and circumference
triangles	Calculates the area of a rectangle, given labeled sides (customary	Compares area of numerous triangles
Finds the perimeter of a polygon using a formula	units)	Determines the area of a triangle drawn on a grid
• Describes the change in perimeter when dimensions of an object are altered	Determines the length or width of a rectangle, given the area (metric units)	Determines the area of a triangle, given the formula
Determines the diameter, given the radius, and vice versa	Solves simple problems involving the area of a square or rectangle	Calculates the area of a rectangle, given labeled sides (customary units)
Describes the change in area of a triangle when 1 dimension of an object is altered (metric units)	Calculates the base or height of a parallelogram, given the area and formula (metric)	Determines the length or width of a rectangle, given the area (metric units)
Determines the area of irregular shapes with partial square units	Determines the area of irregular shapes (customary units)	Describes the change in area of a rectangle when dimensions of an
Estimates and finds volume of a figure using cubic units	Calculates area and perimeter of a rectangle (customary units)	object are altered
Calculates the volume of a rectangular prism, and converts to a	Calculates the volume of rectangular solids	Solves simple problems involving the area of a square or rectangle
different measurement scale (customary units)	Calculates the volume of a rectangular prism, and converts to a	Determines the area of a parallelogram, given a labeled diagram
Identifies rays	different measurement scale (customary units)	Calculates the base or height of a parallelogram, given the area and
Identifies properties of angles	• Identifies rays	formula (metric)
Identifies acute angles	Determines which lines are perpendicular (analysis)	Determines the area of a trapezoid, given the formula (metric units) Solves are bloom accounting areas of different to broad.
Identifies obtuse angles	Identifies and determines missing angle measures for supplementary angles	Solves problems comparing areas of different polygons Determines the area of irregular shapes (system are units)
Identifies and names a trapezoid	Identifies acute angles	Determines the area of irregular shapes (customary units)
Identifies and names a rhombus	Classifies equilateral triangles	Understands the procedure for finding the area and surface area of figures
Identifies and names a quadrilateral	Identifies and names a rhombus	Calculates the volume of rectangular solids
Classifies polygons by type of angle Identifies corners (vertices) of subset	Identifies and names a quadrilateral	Calculates the length, width, or height of a rectangular prism, given the
Identifies corners (vertices) of cubes Identifies the net which makes a sub-alike (energheat) figure.	Compares polygons by properties	area (customary units)
Identifies the net which makes a cube-like (open box) figure	Identifies properties of quadrilaterals	Calculates the volume of a rectangular prism, and converts to a different measurement scale (customary units)
Identifies the number of edges on rectangular prisms Prodicts and varifies the effects of earth initial and while initial policy.	Classifies polygons by type of angle	` ' '
 Predicts and verifies the effects of combining or subdividing basic shapes 	Identifies the number of edges on rectangular prisms	Determines which lines are perpendicular (analysis) Classifies isospeles triangles
Determines an appropriate scale for representing a distance on a map	Uses similarity to solve problems using scale drawings	Classifies isosceles triangles Classifies scalene triangles
	Determines an appropriate scale for representing an object in a scale	Classifies scalene triangles Identifies proportion of circles
	drawing	Identifies properties of circles Compared polygons by properties
		Compares polygons by properties
		Identifies properties of quadrilaterals
		Uses similarity to solve problems using scale drawings

Explanatory Notes



Mathematics

Goal: Geometry

RIT Score Range: 221 - 230 Statements Last Updated: Aug 4, 2014

Skills and Concepts to Enhance (73% Probability*) 211 - 220 Geometric Measurement and Relationships	Skills and Concepts to Develop (50% Probability*) 221 - 230 Geometric Measurement and Relationships	Skills and Concepts to Introduce (27% Probability*) 231 - 240 Geometric Measurement and Relationships
		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
Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig
 Identifies similar and congruent triangles Uses similar figures to construct ratios and solve for a missing side Identifies geometric transformations (rotations) Identifies geometric transformations (translations) 	 Identifies properties of parallel and perpendicular lines Recognizes the interior angle relationships of triangles Uses similar figures to construct ratios and solve for a missing side Uses similar triangles to construct ratios and solve for a missing side Identifies geometric transformations (rotations) Identifies geometric transformations (translations) Identifies geometric transformations (reflections) 	Identifies and determines a missing angle measure in corresponding, vertical, and alternate exterior/interior angles Recognizes the interior angle relationships of triangles Identifies properties of congruent triangles Solves problems involving properties of congruent triangles Uses similar triangles to construct ratios and solve for a missing side Identifies geometric transformations (dilations) Identifies geometric transformations (reflections) Determines whether a given pair of figures on a coordinate plane represents a translation, reflection, rotation, or dilation
New Vocabulary: acute angle, congruent angle, cord, dilation, obtuse	New Vocabulary: cubic meter, interior angle, long, scale factor	New Vocabulary: None
angle, straight angle, transformation	New Signs and Symbols: () ordered pair, ' feet, h height, " inches, = is	New Signs and Symbols: () order of operations, + addition, C
New Signs and Symbols: ∠ 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	equal to, = is equal to, I length, x multiplication, : ratio, V volume, w width	circumference, congruent segment symbol, d diameter, x multiplication, P perimeter, π pi, r radius

Explanatory Notes

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Mathematics

Goal: Geometry

RIT Score Range: 231 - 240 Statements Last Updated: Aug 4, 2014

Skills and Concepts to Enhance (73% Probability*) 221 - 230	Skills and Concepts to Develop (50% Probability*) 231 - 240	Skills and Concepts to Introduce (27% Probability*) 241 - 250
Geometric Measurement and Relationships	Geometric Measurement and Relationships	Geometric Measurement and Relationships
• Determines coordinates of geometric figures in the first quadrant	Measures length to the nearest millimeter	Determines slope from an equation (analysis)
Measures length to the nearest millimeter	Solves problems involving the perimeter of irregular or complex shapes	Determines the midpoint of a line on a coordinate grid
• Determines the perimeter of a figure using non-standard units	Describes the change in perimeter when dimensions of an object are	Determines the figure when plotting ordered pairs
 Solves problems involving the perimeter of squares, rectangles, or triangles 	altered • Identifies the formula for perimeter with a variable	Computes and interprets the midpoint, given a set of ordered pairs (horizontal and vertical lines)
Solves problems involving the perimeter of irregular or complex shapes Describes the charge in activate when dispersions of an abject to the	Determines the circumference when given the diameter or radius (or vice versa)	Determines the circumference when given the diameter or radius (or vice versa)
Describes the change in perimeter when dimensions of an object are altered	Determines the circumference when given the area of a circle (or vice versa)	Determines the circumference when given the area of a circle (or vice versa)
 Describes the change in area of a triangle when 1 dimension of an object is altered (metric units) 	Knows the relationship between radius, diameter, and circumference	Determines the area of a triangle without the formula
 Calculates the area of a rectangle, given labeled sides (customary units) 	Compares area of numerous triangles Determines the area of a triangle drawn on a grid	Determines the area of a figure when plotting ordered pairs without a grid
Determines the length or width of a rectangle, given the area (metric units)	Determines the area of a triangle drawn on a grid Determines the area of a triangle, given the formula	Solves problems involving area of a rectangle and converts to larger or smaller units (customary)
Solves simple problems involving the area of a square or rectangle	Calculates the area of a rectangle, given labeled sides (customary units)	Describes the change in area of a rectangle when dimensions of an object are altered
 Calculates the base or height of a parallelogram, given the area and formula (metric) 	Determines the length or width of a rectangle, given the area (metric units)	Determines the area of a parallelogram, given a labeled diagram
Determines the area of irregular shapes (customary units)	Describes the change in area of a rectangle when dimensions of an	Solves problems involving area of a circle
 Calculates area and perimeter of a rectangle (customary units) 	object are altered	Determines the diameter or radius when given the area of a circle
Calculates the volume of rectangular solids	Solves simple problems involving the area of a square or rectangle	(metric units)
Calculates the volume of a rectangular prism, and converts to a	Determines the area of a parallelogram, given a labeled diagram	Solves problems comparing areas of different polygons
different measurement scale (customary units) • Identifies rays	Calculates the base or height of a parallelogram, given the area and formula (metric)	Determines the area of irregular shapes (customary units) Calculates the area of irregular shapes (metric units)
Determines which lines are perpendicular (analysis)	Determines the area of a trapezoid, given the formula (metric units)	Solves complex problems involving inscribed figures
• Identifies and determines missing angle measures for supplementary	Solves problems comparing areas of different polygons	Determines the surface area of rectangular solids
angles	Determines the area of irregular shapes (customary units)	Determines the effects of changing dimensions on volume (no units)
Identifies acute angles	Understands the procedure for finding the area and surface area of	Identifies and determines missing angle measures for complementary
Classifies equilateral triangles	figures	angles
Identifies and names a rhombus	Calculates the volume of rectangular solids	Recognizes that the sum of the measures of two sides of a triangle
Identifies and names a quadrilateralCompares polygons by properties	Calculates the length, width, or height of a rectangular prism, given the area (customary units)	must be greater than the measure of the third side
Identifies properties of quadrilaterals	Calculates the volume of a rectangular prism, and converts to a different measurement scale (customary units)	
 Classifies polygons by type of angle 	Determines which lines are perpendicular (analysis)	
 Identifies the number of edges on rectangular prisms 	Classifies isosceles triangles	
 Uses similarity to solve problems using scale drawings 	Classifies scalene triangles	
Determines an appropriate scale for representing an object in a scale drawing.	Identifies properties of circles	
drawing	Compares polygons by properties	
	Identifies properties of quadrilaterals	
	Uses similarity to solve problems using scale drawings	
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Explanatory Notes

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Mathematics

Goal: Geometry

RIT Score Range: 231 - 240 Statements Last Updated: Aug 4, 2014

Skills and Concepts to Enhance (73% Probability*) 221 - 230	Skills and Concepts to Develop (50% Probability*) 231 - 240	Skills and Concepts to Introduce (27% Probability*) 241 - 250
Geometric Measurement and Relationships	Geometric Measurement and Relationships	Geometric Measurement and Relationships
	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	
Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig
 Identifies properties of parallel and perpendicular lines Recognizes the interior angle relationships of triangles 	Identifies and determines a missing angle measure in corresponding, vertical, and alternate exterior/interior angles	Uses an indirect method to measure the height of an inaccessible object
Uses similar figures to construct ratios and solve for a missing side Uses similar triangles to construct ratios and solve for a missing side Identifies geometric transformations (rotations) Identifies geometric transformations (translations) Identifies geometric transformations (reflections)	Recognizes the interior angle relationships of triangles Identifies properties of congruent triangles Solves problems involving properties of congruent triangles Uses similar triangles to construct ratios and solve for a missing side Identifies geometric transformations (dilations) Identifies geometric transformations (reflections) Determines whether a given pair of figures on a coordinate plane represents a translation, reflection, rotation, or dilation	Identifies and determines a missing angle measure in corresponding, vertical, and alternate exterior/interior angles Identifies corresponding and alternate exterior/interior angles Uses properties of angles to solve mathematical problems Recognizes the exterior angle relationships of triangles Uses the Pythagorean theorem to solve problems Uses Pythagorean triplets to solve problems Determines whether a given pair of figures on a coordinate plane represents a translation, reflection, rotation, or dilation Determines the coordinates of the dilation of a figure on a coordinate graph Determines the new coordinates of a transformed geometric figure
New Vocabulary: cubic meter, interior angle, long, scale factor	New Vocabulary: None	New Vocabulary: y-axis
New Signs and Symbols: () ordered pair, ´feet, h height, ″ inches, = is equal to, = is equal to, I length, × multiplication, : ratio, V volume, w width	New Signs and Symbols: () order of operations, + addition, C circumference, congruent segment symbol, d diameter, \times multiplication, P perimeter, π pi, r radius	New Signs and Symbols: A area, b base, km kilometer/kilometre, ↔ line symbol, - negative number, parallel symbol, segment overbar, sq square, △ triangle

Explanatory Notes



Mathematics

Goal: Geometry

RIT Score Range: 241 - 250 Statements Last Updated: Aug 4, 2014

Skills and Concepts to Enhance (73% Probability*) 231 - 240	Skills and Concepts to Develop (50% Probability*) 241 - 250	Skills and Concepts to Introduce (27% Probability*) 251 - 260
Geometric Measurement and Relationships	Geometric Measurement and Relationships	Geometric Measurement and Relationships
Measures length to the nearest millimeter	Determines slope from an equation (analysis)	Determines slope from an equation (analysis)
• Solves problems involving the perimeter of irregular or complex shapes	Determines the midpoint of a line on a coordinate grid	Using the slope of an equation, identifies parallel and perpendicular
Describes the change in perimeter when dimensions of an object are	Determines the figure when plotting ordered pairs	lines
 altered Identifies the formula for perimeter with a variable 	Computes and interprets the midpoint, given a set of ordered pairs (horizontal and vertical lines)	Determines the slope of perpendicular lines Determines the midpoint of a line on a coordinate grid
Determines the circumference when given the diameter or radius (or	Determines the circumference when given the diameter or radius (or	Determines the midpoint of a line of a coordinate grid Determines an endpoint of a line segment on a coordinate grid, given
vice versa)	vice versa)	the midpoint and the other endpoint
Determines the circumference when given the area of a circle (or vice versa)	Determines the circumference when given the area of a circle (or vice versa)	Determines the circumference when given the area of a circle (or vice versa)
• Knows the relationship between radius, diameter, and circumference	Determines the area of a triangle without the formula	Determines the area of a figure when plotting ordered pairs without a
Compares area of numerous triangles	Determines the area of a figure when plotting ordered pairs without a	grid
Determines the area of a triangle drawn on a grid	grid	Determines the area of a parallelogram, given a labeled diagram
Determines the area of a triangle, given the formula	Solves problems involving area of a rectangle and converts to larger or smaller units (customary)	Calculate the height of a trapezoid, given the area, without the formula given (metric)
 Calculates the area of a rectangle, given labeled sides (customary units) 	Describes the change in area of a rectangle when dimensions of an object are altered	Determines the diameter or radius when given the area of a circle (metric units)
 Determines the length or width of a rectangle, given the area (metric units) 	Determines the area of a parallelogram, given a labeled diagram	Solves problems involving complex figures (e.g., triangle,
• Describes the change in area of a rectangle when dimensions of an	Solves problems involving area of a circle	parallelogram)
object are altered	Determines the diameter or radius when given the area of a circle	Solves complex problems involving inscribed figures
Solves simple problems involving the area of a square or rectangle	(metric units)	Solves real-world problems involving surface area Calculates the length of any side of a subscription the values.
Determines the area of a parallelogram, given a labeled diagram	Solves problems comparing areas of different polygons Determines the area of irregular shapes (customary units)	Calculates the length of one side of a cube, given the volume (customary units)
 Calculates the base or height of a parallelogram, given the area and formula (metric) 	Calculates the area of irregular shapes (metric units)	Determines the volume of a cylinder
Determines the area of a trapezoid, given the formula (metric units)	Solves complex problems involving inscribed figures	Calculates the radius of a sphere, given the volume and formula
Solves problems comparing areas of different polygons	Determines the surface area of rectangular solids	(metric units)
Determines the area of irregular shapes (customary units)	Determines the effects of changing dimensions on volume (no units)	Solves real-world problems comparing volumes of figures
Understands the procedure for finding the area and surface area of figures	Identifies and determines missing angle measures for complementary angles	Recognizes that the sum of the measures of two sides of a triangle must be greater than the measure of the third side
Calculates the volume of rectangular solids	Recognizes that the sum of the measures of two sides of a triangle	Classifies polygons by properties
• Calculates the length, width, or height of a rectangular prism, given the area (customary units)	must be greater than the measure of the third side	
Calculates the volume of a rectangular prism, and converts to a different measurement scale (customary units)		
• Determines which lines are perpendicular (analysis)		
Classifies isosceles triangles		
Classifies scalene triangles		
Identifies properties of circles		
Compares polygons by properties		
Identifies properties of quadrilaterals		
 Uses similarity to solve problems using scale drawings 		

Explanatory Notes



Mathematics

Goal: Geometry

RIT Score Range: 241 - 250 Statements Last Updated: Aug 4, 2014

Skills and Concepts to Enhance (73% Probability*) 231 - 240	Skills and Concepts to Develop (50% Probability*) 241 - 250	Skills and Concepts to Introduce (27% Probability*) 251 - 260
Geometric Measurement and Relationships	Geometric Measurement and Relationships	Geometric Measurement and Relationships
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 Congruence, Similarity, Right Triangles, & Trig Identifies and determines a missing angle measure in corresponding,	Congruence, Similarity, Right Triangles, & Trig • Uses an indirect method to measure the height of an inaccessible	Congruence, Similarity, Right Triangles, & Trig • Determines the distance between two points
vertical, and alternate exterior/interior angles Recognizes the interior angle relationships of triangles Identifies properties of congruent triangles Solves problems involving properties of congruent triangles Uses similar triangles to construct ratios and solve for a missing side Identifies geometric transformations (dilations) Identifies geometric transformations (reflections) Determines whether a given pair of figures on a coordinate plane represents a translation, reflection, rotation, or dilation	Identifies and determines a missing angle measure in corresponding, vertical, and alternate exterior/interior angles Identifies corresponding and alternate exterior/interior angles Uses properties of angles to solve mathematical problems Recognizes the exterior angle relationships of triangles Uses the Pythagorean theorem to solve problems Uses Pythagorean triplets to solve problems Determines whether a given pair of figures on a coordinate plane represents a translation, reflection, rotation, or dilation Determines the coordinates of the dilation of a figure on a coordinate graph Determines the new coordinates of a transformed geometric figure	Uses reasoning to verify properties of parallel and perpendicular lines Identifies corresponding and alternate exterior/interior angles Uses properties of angles to solve mathematical problems Recognizes the exterior angle relationships of triangles Solves problems involving properties of triangles Uses the Pythagorean theorem to solve problems Uses Pythagorean triplets to solve problems Verifies congruency of triangles using ASA, SAS, SSS, or AAS Solves problems involving similar polygons (not triangles) Solves problems involving properties of similar triangles (e.g., using geometric mean, Triangle Proportionality Theorem) Uses picture representations to identify symmetry of plane figures with respect to a point or line Determines the coordinates of the dilation of a figure on a coordinate graph
New Vocabulary: None	New Vocabulary: y-axis	New Vocabulary: rotational symmetry
New Signs and Symbols: () order of operations, + addition, C circumference, congruent segment symbol, d diameter, × multiplication, P perimeter, π pi, r radius	New Signs and Symbols: A area, b base, km kilometer/kilometre, \leftrightarrow line symbol, - negative number, parallel symbol, segment overbar, sq square, \triangle triangle	New Signs and Symbols: AAS angle angle side, ASA angle side angle, ° degrees, ≅ is congruent to, perpendicular to, SAS side angle side, square root symbol, SSA side side angle, SSS side side side, - subtraction

Explanatory Notes

* Åt 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.

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DesCartes: A Continuum of Learning®

Mathematics

Goal: Geometry

251 - 260 RIT Score Range: Statements Last Updated: Aug 4, 2014

Skills and Concepts to Enhance (73% Probability*) 241 - 250	Skills and Concepts to Develop (50% Probability*) 251 - 260	Skills and Concepts to Introduce (27% Probability*) 261 - 270
eometric Measurement and Relationships	Geometric Measurement and Relationships	Geometric Measurement and Relationships
Determines slope from an equation (analysis)	Determines slope from an equation (analysis)	Determines slope from an equation (analysis)
Determines the midpoint of a line on a coordinate grid	Using the slope of an equation, identifies parallel and perpendicular	Using the slope of an equation, identifies parallel and perpendicula
Determines the figure when plotting ordered pairs	lines	lines
Computes and interprets the midpoint, given a set of ordered pairs	Determines the slope of perpendicular lines	Determines the slope of perpendicular lines
norizontal and vertical lines)	Determines the midpoint of a line on a coordinate grid	Defines pi and knows common estimates (3.14 and 22/7)
Determines the circumference when given the diameter or radius (or ice versa)	Determines an endpoint of a line segment on a coordinate grid, given the midpoint and the other endpoint	Solves problems involving complex figures (e.g., triangle, parallelogram)
Determines the circumference when given the area of a circle (or vice ersa)	Determines the circumference when given the area of a circle (or vice versa)	Solves real-world problems involving surface area
Determines the area of a triangle without the formula	Determines the area of a figure when plotting ordered pairs without a	
Determines the area of a figure when plotting ordered pairs without a	grid	
rid	Determines the area of a parallelogram, given a labeled diagram	
Solves problems involving area of a rectangle and converts to larger or maller units (customary)	Calculate the height of a trapezoid, given the area, without the formula given (metric)	
Describes the change in area of a rectangle when dimensions of an bject are altered	Determines the diameter or radius when given the area of a circle (metric units)	
Determines the area of a parallelogram, given a labeled diagram	Solves problems involving complex figures (e.g., triangle,	
Solves problems involving area of a circle	parallelogram)	
Determines the diameter or radius when given the area of a circle	Solves complex problems involving inscribed figures	
metric units)	Solves real-world problems involving surface area	
Solves problems comparing areas of different polygons	Calculates the length of one side of a cube, given the volume (customary units)	
Determines the area of irregular shapes (customary units)	Determines the volume of a cylinder	
Calculates the area of irregular shapes (metric units)	Calculates the radius of a sphere, given the volume and formula	
Solves complex problems involving inscribed figures	(metric units)	
Determines the surface area of rectangular solids	Solves real-world problems comparing volumes of figures	
Determines the effects of changing dimensions on volume (no units)	Recognizes that the sum of the measures of two sides of a triangle	
Identifies and determines missing angle measures for complementary ngles	must be greater than the measure of the third side	
Recognizes that the sum of the measures of two sides of a triangle	Classifies polygons by properties	
nust be greater than the measure of the third side		
ongruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig
Uses an indirect method to measure the height of an inaccessible	Determines the distance between two points	Determines sine of an angle in a given right triangle
bject	Uses reasoning to verify properties of parallel and perpendicular lines	Determines cosine of an angle in a given right triangle
Identifies and determines a missing angle measure in corresponding,	Identifies corresponding and alternate exterior/interior angles	Determines tangent of an angle in a given triangle
ertical, and alternate exterior/interior angles	Uses properties of angles to solve mathematical problems	Uses trigonometric methods to solve mathematical problems invol
Identifies corresponding and alternate exterior/interior angles	Recognizes the exterior angle relationships of triangles	triangles
Uses properties of angles to solve mathematical problems	Solves problems involving properties of triangles	Uses properties of angles to solve mathematical problems
Recognizes the exterior angle relationships of triangles	Uses the Pythagorean theorem to solve problems	Uses the properties of 30-60-90 triangles to solve problems
Uses the Pythagorean theorem to solve problems	Uses Pythagorean triplets to solve problems	
Uses Pythagorean triplets to solve problems	Verifies congruency of triangles using ASA, SAS, SSS, or AAS	



Mathematics

Goal: Geometry

RIT Score Range: 251 - 260 Statements Last Updated: Aug 4, 2014

Skills and Concepts to Enhance (73% Probability*) 241 - 250	Skills and Concepts to Develop (50% Probability*) 251 - 260	Skills and Concepts to Introduce (27% Probability*) 261 - 270
Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig
 Determines whether a given pair of figures on a coordinate plane represents a translation, reflection, rotation, or dilation Determines the coordinates of the dilation of a figure on a coordinate graph Determines the new coordinates of a transformed geometric figure 	Solves problems involving similar polygons (not triangles) Solves problems involving properties of similar triangles (e.g., using geometric mean, Triangle Proportionality Theorem) Uses picture representations to identify symmetry of plane figures with respect to a point or line Determines the coordinates of the dilation of a figure on a coordinate graph	
New Vocabulary: y-axis	New Vocabulary: rotational symmetry	New Vocabulary: trigonometric relationship
New Signs and Symbols: A area, b base, km kilometer/kilometre, ↔ line symbol, - negative number, parallel symbol, segment overbar, sq square, △ triangle	New Signs and Symbols: AAS angle angle side, ASA angle side angle, ° degrees, ≅ is congruent to, perpendicular to, SAS side angle side, square root symbol, SSA side side angle, SSS side side side, - subtraction	New Signs and Symbols: cos cosine, sin sine, tan tangent

Explanatory Notes

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Mathematics

Goal: Geometry

RIT Score Range: 261 - 270 Statements Last Updated: Aug 4, 2014

Skills and Concepts to Enhance (73% Probability*) 251 - 260	Skills and Concepts to Develop (50% Probability*) 261 - 270	Skills and Concepts to Introduce (27% Probability*) > 270
Geometric Measurement and Relationships	Geometric Measurement and Relationships	Geometric Measurement and Relationships
Determines slope from an equation (analysis)	Determines slope from an equation (analysis)	
• Using the slope of an equation, identifies parallel and perpendicular lines	Using the slope of an equation, identifies parallel and perpendicular lines	
Determines the slope of perpendicular lines	Determines the slope of perpendicular lines	
Determines the midpoint of a line on a coordinate grid	Defines pi and knows common estimates (3.14 and 22/7)	
• Determines an endpoint of a line segment on a coordinate grid, given the midpoint and the other endpoint	Solves problems involving complex figures (e.g., triangle, parallelogram)	
• Determines the circumference when given the area of a circle (or vice versa)	Solves real-world problems involving surface area	
Determines the area of a figure when plotting ordered pairs without a grid		
Determines the area of a parallelogram, given a labeled diagram		
• Calculate the height of a trapezoid, given the area, without the formula given (metric)		
• Determines the diameter or radius when given the area of a circle (metric units)		
 Solves problems involving complex figures (e.g., triangle, parallelogram) 		
 Solves complex problems involving inscribed figures 		
Solves real-world problems involving surface area		
• Calculates the length of one side of a cube, given the volume (customary units)		
Determines the volume of a cylinder		
 Calculates the radius of a sphere, given the volume and formula (metric units) 		
Solves real-world problems comparing volumes of figures		
• Recognizes that the sum of the measures of two sides of a triangle must be greater than the measure of the third side		
Classifies polygons by properties		
Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig
Determines the distance between two points	Determines sine of an angle in a given right triangle	Uses trigonometric methods to solve mathematical problems involving
Uses reasoning to verify properties of parallel and perpendicular lines	Determines cosine of an angle in a given right triangle	triangles
• Identifies corresponding and alternate exterior/interior angles	Determines tangent of an angle in a given triangle	
Uses properties of angles to solve mathematical problems	Uses trigonometric methods to solve mathematical problems involving	
• Recognizes the exterior angle relationships of triangles	triangles	
Solves problems involving properties of triangles	Uses properties of angles to solve mathematical problems	
Uses the Pythagorean theorem to solve problems	Uses the properties of 30-60-90 triangles to solve problems	
Uses Pythagorean triplets to solve problems		
Oses Fythagorean triplets to solve problems		
Verifies congruency of triangles using ASA, SAS, SSS, or AAS		

Explanatory Notes



Mathematics

Goal: Geometry

RIT Score Range: 261 - 270 Statements Last Updated: Aug 4, 2014

Skills and Concepts to Enhance (73% Probability*) 251 - 260	Skills and Concepts to Develop (50% Probability*) 261 - 270	Skills and Concepts to Introduce (27% Probability*) > 270
Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig
• Solves problems involving properties of similar triangles (e.g., using geometric mean, Triangle Proportionality Theorem)		
• Uses picture representations to identify symmetry of plane figures with respect to a point or line		
• Determines the coordinates of the dilation of a figure on a coordinate graph		
New Vocabulary: rotational symmetry	New Vocabulary: trigonometric relationship	New Vocabulary: None
New Signs and Symbols: AAS angle angle side, ASA angle side angle, ° degrees, ≅ is congruent to, perpendicular to, SAS side angle side, square root symbol, SSA side side angle, SSS side side, - subtraction	New Signs and Symbols: cos cosine, sin sine, tan tangent	New Signs and Symbols: None

Explanatory Notes



Mathematics

Goal: Geometry

RIT Score Range: > 270 Statements Last Updated: Aug 4, 2014

Skills and Concepts to Enhance (73% Probability*) 261 - 270	Skills and Concepts to Develop (50% Probability*) > 270
Geometric Measurement and Relationships	Geometric Measurement and Relationships
 Determines slope from an equation (analysis) 	
 Using the slope of an equation, identifies parallel and perpendicular lines 	
Determines the slope of perpendicular lines	
 Defines pi and knows common estimates (3.14 and 22/7) 	
 Solves problems involving complex figures (e.g., triangle, parallelogram) 	
 Solves real-world problems involving surface area 	
Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig
Determines sine of an angle in a given right triangle	Uses trigonometric methods to solve mathematical problems involving
 Determines cosine of an angle in a given right triangle 	triangles
Determines tangent of an angle in a given triangle	
Dotor minos tangont or an anglo in a given thangle	
Uses trigonometric methods to solve mathematical problems involving triangles	
Uses trigonometric methods to solve mathematical problems involving	
Uses trigonometric methods to solve mathematical problems involving triangles	
 Uses trigonometric methods to solve mathematical problems involving triangles Uses properties of angles to solve mathematical problems 	New Vocabulary: None

Explanatory Notes

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