

DesCartes: A Continuum of Learning®

Mathematics

Goal: Geometry

211 - 220 RIT Score Range: Statements Last Updated: Mar 10, 2014

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 Estimates the measure of acute, right, and obtuse angles using 45 and 00 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	Uses the appropriate unit of measure for length Knows the approximate size of a millimeter Selects and uses the appropriate type and size of unit in metric system (mass) Solves simple problems involving capacity Estimates the measure of acute, right, and obtuse angles using 45 and 90 degrees as referents Measures angles using a protractor Determines the perimeter of a figure using non-standard units Solves problems involving the perimeter of squares, rectangles, or triangles Finds the perimeter of a polygon using a formula Describes the change in perimeter when dimensions of an object are	Determines coordinates of geometric figures in the first quadrant Measures length to the nearest millimeter Determines the perimeter of a figure using non-standard units Solves problems involving the perimeter of squares, rectangles, or triangles Solves problems involving the perimeter of irregular or complex shape: Describes the change in perimeter when dimensions of an object are altered Describes the change in area of a triangle when 1 dimension of an object is altered (metric units) Calculates the area of a rectangle, given labeled sides (customary units) Determines the length or width of a rectangle, given the area (metric
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 Estimates the measure of acute, right, and obtuse angles using 45 and 00 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	Now the approximate size of a millimeter Selects and uses the appropriate type and size of unit in metric system (mass) Solves simple problems involving capacity Estimates the measure of acute, right, and obtuse angles using 45 and 90 degrees as referents Measures angles using a protractor Determines the perimeter of a figure using non-standard units Solves problems involving the perimeter of squares, rectangles, or triangles Finds the perimeter of a polygon using a formula Describes the change in perimeter when dimensions of an object are	Measures length to the nearest millimeter Determines the perimeter of a figure using non-standard units Solves problems involving the perimeter of squares, rectangles, or triangles Solves problems involving the perimeter of irregular or complex shape Describes the change in perimeter when dimensions of an object are altered Describes the change in area of a triangle when 1 dimension of an object is altered (metric units) Calculates the area of a rectangle, given labeled sides (customary units)
Measures length to the nearest centimeter Knows the approximate size of a pound Knows the approximate size of a gram Estimates the measure of acute, right, and obtuse angles using 45 and 10 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	Selects and uses the appropriate type and size of unit in metric system (mass) Solves simple problems involving capacity Estimates the measure of acute, right, and obtuse angles using 45 and 90 degrees as referents Measures angles using a protractor Determines the perimeter of a figure using non-standard units Solves problems involving the perimeter of squares, rectangles, or triangles Finds the perimeter of a polygon using a formula Describes the change in perimeter when dimensions of an object are	 Determines the perimeter of a figure using non-standard units Solves problems involving the perimeter of squares, rectangles, or triangles Solves problems involving the perimeter of irregular or complex shape Describes the change in perimeter when dimensions of an object are altered Describes the change in area of a triangle when 1 dimension of an object is altered (metric units) Calculates the area of a rectangle, given labeled sides (customary units)
Knows the approximate size of a pound Knows the approximate size of a gram Estimates the measure of acute, right, and obtuse angles using 45 and 00 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	 (mass) Solves simple problems involving capacity Estimates the measure of acute, right, and obtuse angles using 45 and 90 degrees as referents Measures angles using a protractor Determines the perimeter of a figure using non-standard units Solves problems involving the perimeter of squares, rectangles, or triangles Finds the perimeter of a polygon using a formula Describes the change in perimeter when dimensions of an object are 	Solves problems involving the perimeter of squares, rectangles, or triangles Solves problems involving the perimeter of irregular or complex shape Describes the change in perimeter when dimensions of an object are altered Describes the change in area of a triangle when 1 dimension of an object is altered (metric units) Calculates the area of a rectangle, given labeled sides (customary units)
Knows the approximate size of a gram Estimates the measure of acute, right, and obtuse angles using 45 and 10 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	 Solves simple problems involving capacity Estimates the measure of acute, right, and obtuse angles using 45 and 90 degrees as referents Measures angles using a protractor Determines the perimeter of a figure using non-standard units Solves problems involving the perimeter of squares, rectangles, or triangles Finds the perimeter of a polygon using a formula Describes the change in perimeter when dimensions of an object are 	triangles • Solves problems involving the perimeter of irregular or complex shape • Describes the change in perimeter when dimensions of an object are altered • Describes the change in area of a triangle when 1 dimension of an object is altered (metric units) • Calculates the area of a rectangle, given labeled sides (customary units)
Estimates the measure of acute, right, and obtuse angles using 45 and 00 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	 Estimates the measure of acute, right, and obtuse angles using 45 and 90 degrees as referents Measures angles using a protractor Determines the perimeter of a figure using non-standard units Solves problems involving the perimeter of squares, rectangles, or triangles Finds the perimeter of a polygon using a formula Describes the change in perimeter when dimensions of an object are 	 Solves problems involving the perimeter of irregular or complex shape Describes the change in perimeter when dimensions of an object are altered Describes the change in area of a triangle when 1 dimension of an object is altered (metric units) Calculates the area of a rectangle, given labeled sides (customary units)
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	 90 degrees as referents Measures angles using a protractor Determines the perimeter of a figure using non-standard units Solves problems involving the perimeter of squares, rectangles, or triangles Finds the perimeter of a polygon using a formula Describes the change in perimeter when dimensions of an object are 	Describes the change in perimeter when dimensions of an object are altered Describes the change in area of a triangle when 1 dimension of an object is altered (metric units) 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) Estimates the area of rectangles using square units Determines the area of irregular shapes with partial square units	 Determines the perimeter of a figure using non-standard units Solves problems involving the perimeter of squares, rectangles, or triangles Finds the perimeter of a polygon using a formula Describes the change in perimeter when dimensions of an object are 	Describes the change in area of a triangle when 1 dimension of an object is altered (metric units) Calculates the area of a rectangle, given labeled sides (customary units)
bject is altered (metric units) Estimates the area of rectangles using square units Determines the area of irregular shapes with partial square units	 Solves problems involving the perimeter of squares, rectangles, or triangles Finds the perimeter of a polygon using a formula Describes the change in perimeter when dimensions of an object are 	object is altered (metric units) • Calculates the area of a rectangle, given labeled sides (customary units)
Determines the area of irregular shapes with partial square units	 Finds the perimeter of a polygon using a formula Describes the change in perimeter when dimensions of an object are 	units)
	Describes the change in perimeter when dimensions of an object are	Determines the length or width of a rectangle, given the area (metric
Identifies situations where it is appropriate to calculate area	altered	units)
Estimates and finds volume of a figure using cubic units	Determines the diameter, given the radius, and vice versa	Solves simple problems involving the area of a square or rectangle
Uses basic indirect methods to estimate measurements (grids for area firregular figures)	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)
Identifies parallel lines	Determines the area of irregular shapes with partial square units	Determines the area of irregular shapes (customary units)
Uses models to compare angles relative to right angles	Estimates and finds volume of a figure using cubic units	Calculates area and perimeter of a rectangle (customary units)
Identifies and names a parallelogram	Calculates the volume of a rectangular prism, and converts to a	Calculates the volume of rectangular solids
Identifies and names a trapezoid Identifies and names a hexagon	different measurement scale (customary units)	Calculates the volume of a rectangular prism, and converts to a different measurement scale (customary units)
Classifies polygons by number of sides	Identifies rays	Identifies rays
Classifies polygons by sides and angles	Identifies properties of angles Identifies pay to angles	Determines which lines are perpendicular (analysis)
Identifies corners (vertices) of cubes	Identifies acute angles Identifies obtuse angles	Identifies and determines missing angle measures for supplementary
Classifies cubes by their properties (e.g., edges with equal lengths,	Identifies and names a trapezoid	angles • Identifies acute angles
aces with equal areas and congruent shapes, right angle corners)	Identifies and names a rhombus	Classifies equilateral triangles
 Identifies a cube from a net Identifies and names a cylinder 	Identifies and names a quadrilateral	Identifies and names a rhombus
	Classifies polygons by type of angle	Identifies and names a quadrilateral
	Identifies corners (vertices) of cubes	Compares polygons by properties
	Identifies the net which makes a cube-like (open box) figure	Identifies properties of quadrilaterals
	Identifies the number of edges on rectangular prisms	Classifies polygons by type of angle
	Predicts and verifies the effects of combining or subdividing basic shapes Determines an appropriate scale for representing a distance on a map	Identifies the number of edges on rectangular prisms
		Uses similarity to solve problems using scale drawings
		Determines an appropriate scale for representing an object in a scale drawing
ongruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig

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



DesCartes: A Continuum of Learning®

Mathematics

Goal: Geometry

RIT Score Range: 211 - 220 Statements Last Updated: Mar 10, 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
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) Identifies geometric transformations (translations)	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)
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
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	equal to, = is equal to, I length, × multiplication, : ratio, V volume, w width

Explanatory Note

Generated 6/5/14, 2:57:04 PM

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