

DesCartes: A Continuum of Learning®

Mathematics

Goal: Geometry

RIT Score Range: 261 - 270
Statements Last Updated: Mar 10, 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 <ul style="list-style-type: none"> Determines slope from an equation (analysis) Using the slope of an equation, identifies parallel and perpendicular lines Determines the slope of perpendicular lines Determines the midpoint of a line on a coordinate grid Determines an endpoint of a line segment on a coordinate grid, given the midpoint and the other endpoint Determines the circumference when given the area of a circle (or vice versa) 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 	Geometric Measurement and Relationships <ul style="list-style-type: none"> 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 	Geometric Measurement and Relationships
Congruence, Similarity, Right Triangles, & Trig <ul style="list-style-type: none"> Determines the distance between two points 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 	Congruence, Similarity, Right Triangles, & Trig <ul style="list-style-type: none"> Determines sine of an angle in a given right triangle Determines cosine of an angle in a given right triangle Determines tangent of an angle in a given triangle Uses trigonometric methods to solve mathematical problems involving triangles Uses properties of angles to solve mathematical problems Uses the properties of 30-60-90 triangles to solve problems 	Congruence, Similarity, Right Triangles, & Trig <ul style="list-style-type: none"> Uses trigonometric methods to solve mathematical problems involving triangles

Explanatory Notes

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

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Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig	Congruence, Similarity, Right Triangles, & Trig
<ul style="list-style-type: none"> 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 		
<i>New Vocabulary:</i> rotational symmetry	<i>New Vocabulary:</i> trigonometric relationship	<i>New Vocabulary:</i> None
<i>New Signs and Symbols:</i> 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	<i>New Signs and Symbols:</i> cos cosine, sin sine, tan tangent	<i>New Signs and Symbols:</i> None

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