DesCartes: A Continuum of Learning®

Mathematics

Goal: Measurement and Data

RIT Score Range: 231 - 240
Statements Last Updated: Mar 10, 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 Problem Solving	**Geometric Measurement and Problem Solving**	**Geometric Measurement and Problem Solving**
• Computes with dollars and cents over $5.00 and converts to decimals (multiplication/division) • Computes the value of multiple bills and coins (multiplication/division) • Measures length to the nearest millimeter • Converts between inches, feet, and yards • Converts between millimeters, centimeters, meters, and kilometers • Solves problems involving length in the customary system and converts to larger or smaller units • Converts between ounces and pounds • Converts between ounces, pounds, and tons • Converts between cups, pints, quarts, and gallons • Converts within the metric system • Apply dimensional analysis to simple real-world problems (capacity) • Computes 2-step conversions between units of time • Applies dimensional analysis to simple real-world problems (time) • Solves difficult problems involving elapsed time, with the conversion of hours • Solves complex problems involving miles/kilometers per hour • Solves problems involving rates • 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 shapes • Solves problems involving perimeter and converts to larger or smaller units • Describes the change in perimeter when dimensions of an object are altered • Calculates the area of a rectangle, given labeled sides (customary units) • Determines the length or width of a rectangle, given the area (metric units) • Determines the area of irregular shapes (customary units) • Calculates area and perimeter of a rectangle (customary units) • Calculates the volume of rectangular solids	• Measures length to the nearest millimeter • Converts between millimeters, centimeters, meters, and kilometers • Apply dimensional analysis to simple real-world problems (length) • Solves problems involving length in the customary system and converts to larger or smaller units • Converts between grams and kilograms • Converts within the metric system • Apply dimensional analysis to simple real-world problems (capacity) • Solves problems involving capacity in the metric system and converts to larger or smaller units • Solves problems involving rates • Solves problems involving the perimeter of irregular or complex shapes • Describes the change in perimeter when dimensions of an object are altered • Identifies the formula for perimeter with a variable • Determines the area of a triangle drawn on a grid • Calculates the area of a rectangle, given labeled sides (customary units) • Determines the length or width of a rectangle, given the area (metric units) • Determines the area of irregular shapes (customary units) • Calculates the volume of rectangular solids • Calculates the length, width, or height of a rectangular prism, given the area (customary units)	• Apply dimensional analysis to simple real-world problems (length) • Solves problems involving capacity in the metric system and converts to larger or smaller units • Solves problems involving area of a rectangle and converts to larger or smaller units (customary) • Determines the area of irregular shapes (customary units) • Calculates the area of irregular shapes (metric units) • Solves complex problems involving inscribed figures • Uses properties of angles to solve mathematical problems
Represent and Interpret Data	**Represent and Interpret Data**	**Represent and Interpret Data**
• Determines appropriate intervals and/or scale for a bar graph	• Determines appropriate intervals and/or scale for a bar graph • Interprets data given in horizontal and vertical bar graphs to solve problems	

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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New Vocabulary: cubic meter	*New Vocabulary:* None	*New Vocabulary:* None
New Signs and Symbols: h height, l length, mL milliliter/millilitre, mm millimeter/millimetre, V volume, w width	*New Signs and Symbols:* ( ) order of operations, + addition, kg kilogram, P perimeter	*New Signs and Symbols:* × multiplication

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