DesCartes: A Continuum of Learning

Mathematics
Goal: Measurement and Data

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RIT Score Range:	201-210
Statements Last Updated:	Mar 21, 2013

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Skills and Concepts to Enhance (73% Probability*) 191-200	Skills and Concepts to Develop (50% Probability*) 201-210	Skills and Concepts to Develop (27% Probability*) 211-220
Geometric Measurement and Problem Solving	**Geometric Measurement and Problem Solving**	**Geometric Measurement and Problem Solving**
• Adds money with regrouping • Identifies the value of a collection of coins and bills to $10.00 by "counting on" (without picture of money) • Finds equivalent combinations of coins with the same value • Makes change to $1.00 by "counting on" or subtracting • Solves real-world problems involving decimals (not money) using addition and subtraction • Identifies the value of a collection of coins to $1.00 (without picture of coins) • Computes with dollars and cents up to and including $5.00 and converts to decimals (addition/subtraction only) • Computes 1 operation on real-world problems involving money over $5.00 (addition/subtraction only) • Computes half price (multiplication/division) • Measures length with non-standard units • Computes basic operations with units of weight/mass • Converts between cups and pints • Converts between cups, pints, and quarts • Identifies the correct time, given the words, and vice versa • Determines elapsed clock time • Tells time to the nearest quarter hour • Determines elapsed time involving whole hours whole days, whole years • Tells time to the nearest 1 minute • Computes simple conversions among units of time (minutes, hours) *Note: Some learning statements removed to improve readability*	• Uses the appropriate unit of measure for length • Computes the value of multiple bills and coins (addition/subtraction only) • Computes addition and subtraction on multiple-step real-world problems involving money • Computes money problems with multiple operations (addition/subtraction only) • Computes addition, subtraction, multiplication, and division on multiple-step, real-world problems involving money • Knows the approximate size of a yard • Measures length to the nearest centimeter • Converts between inches and feet • Knows the approximate size of a pound • Knows the approximate size of a gram • Converts between cups and pints • Converts between cups, pints, and quarts • Computes simple conversions among units of time (hours, days) • Computes more difficult conversions among units of time • Applies dimensional analysis to simple real-world problems (time) • Solves simple problems involving elapsed time with the conversion of hours • Solves simple problems involving miles per gallon • Solves simple problems involving miles/kilometers per hour	• Computes the value of multiple bills and coins (addition/subtraction only) • Analyzes and computes 1 operation on real-world problems involving money over $5.00 (multiplication/division) • Computes with dollars and cents over $5.00 and converts to decimals (multiplication/division) • Computes addition and subtraction on multiple-step real-world problems involving money • Computes addition, subtraction, multiplication, and division on multiple-step, real-world problems involving money • Uses the appropriate unit of measure for length • Knows the approximate size of a millimeter • Converts between inches and feet • Converts between inches, feet, and yards • Selects and uses the appropriate type and size of unit in metric system (mass) • Solves simple problems involving measurement of weight • Converts between cups, pints, quarts, and gallons • Apply dimensional analysis to simple real-world problems (capacity) • Computes more difficult conversions among units of time • Relates years, decades, centuries, and millenniums • Applies dimensional analysis to simple real-world problems (time) • Solves difficult problems involving elapsed time, with the conversion of hours • Solves simple problems involving miles per gallon
Represent and Interpret Data	**Represent and Interpret Data**	**Represent and Interpret Data**
• Reads and interprets data from a bar graph • Reads and interprets dual bar graphs • Interprets a simple bar graph – calculation required • Draws conclusions from data – tally charts or frequency tables • Reads and interprets data from a pictograph • Interprets a pictograph – calculation required *New Vocabulary:* decade, deposit, longer, miles per hour *New Signs and Symbols:* °F degrees Fahrenheit, ft feet, g gram, " inches, lb pound, m meter/metre, min minute, yd yard	• Solves problems using pictographs • Organizes data to create simple bar graphs • Solves problems using bar graphs • Solves problems using dual bar graphs • Draws conclusions from data – bar graphs *New Vocabulary:* bar graph, cubic centimeter, cubic unit, larger *New Signs and Symbols:* variable	• Solves problems using pictographs • Solves problems using bar graphs • Reads and interprets data in line plots *New Vocabulary:* century, coin, how long, line plot, union *New Signs and Symbols:* $ dollar sign, hr hour, ↓ measurement span down, ← measurement span left, → measurement span right, ↑ measurement span up

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.