DesCartes: A Continuum of Learning®

Mathematics

Goal: The Real and Complex Number Systems

RIT Score Range: 251 - 260
Statements Last Updated: Mar 10, 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*) > 260
Ratios and Proportional Relationships	**Ratios and Proportional Relationships**	**Ratios and Proportional Relationships**
• Solves real-world problems involving decimals (not money) using multiplication • Solves multiple-step problems involving proportions • Solves problems involving a fractional increase • Calculates the percent one number is of another (e.g., 20 is what % of 90) • Calculates a percent of a rational number (e.g., 6% of 0.78) • Solves problems involving percents (analysis) • Solves problems involving simple percent discounts (e.g., finding sale price) • Solves problems involving complex percent discounts (e.g., finding percent discount, regular price) • Calculates commission/deductions and total pay • Solves problems involving successive discounts • Uses dimensional analysis for unit conversions (length) • Apply dimensional analysis to simple real-world problems (length) • Solves problems involving weight in the customary system and converts to larger or smaller units • Uses dimensional analysis for unit conversions (time) • Solves problems involving rate conversions (e.g., mi/hr to ft/sec) • Identifies the ratio from a given real-world situation	• Solves problems involving complex percent discounts (e.g., finding percent discount, regular price) • Solves problems involving successive discounts • Uses dimensional analysis for unit conversions (time) • Solves problems involving rate conversions (e.g., mi/hr to ft/sec)	• Solves problems involving successive discounts • Solves problems involving rate conversions (e.g., mi/hr to ft/sec)
Perform Operations	**Perform Operations**	**Perform Operations**
• Uses a number line to determine the distance between a positive and negative number • Subtracts integers • Uses the multiplicative inverse property with rational numbers • Uses factor and multiple concepts to solve difficult problems • Identifies the least common multiple of whole numbers	• Uses the additive inverse property with rational numbers • Performs operations on complex numbers and expresses the results in simplest form • Uses factor and multiple concepts to solve difficult problems	• Performs operations on complex numbers and expresses the results in simplest form
Extend and Use Properties	**Extend and Use Properties**	**Extend and Use Properties**
• Estimates the square roots of numbers • Simplifies expressions containing square roots • Uses expressions with absolute value to represent situations • Computes and interprets distance, given a set of ordered pairs (horizontal and vertical lines)	• Simplifies expressions containing square roots • Simplifies radical expressions • Uses expressions with absolute value to represent situations	
New Vocabulary: feet per second, least common multiple	*New Vocabulary:* None	*New Vocabulary:* None
New Signs and Symbols: LCM lowest common multiple, sec second, square root symbol	*New Signs and Symbols:* i square root of -1	*New Signs and Symbols:* None

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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Educational Standard: Common Core Mathematics K-12: 2010