DesCartes: A Continuum of Learning®

Mathematics

Goal: Number and Operations

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*) > 240
Understand Place Value, Counting, and Cardinality	**Understand Place Value, Counting, and Cardinality**	**Understand Place Value, Counting, and Cardinality**
• Multiplies a decimal by 10, 100, 1000 • Divides a decimal by 10, 100, 1000 • Determines the relative magnitude of whole numbers • Rounds whole numbers to the nearest million • Writes equivalent forms of whole numbers using place value (numbers 100 or greater) (e.g., 253 = 2 hundreds, 5 tens, and 3 ones) • Writes whole numbers in standard and exponential form • Represents a decimal to thousandths place (e.g., three thousandths = 0.003) • Represents a decimal to the hundred thousandths place - (e.g., three hundred thousandths = 0. 00003) • Compares and orders decimals to the hundredths place (not same number of digits after decimal) • Compares and orders decimals to the thousandths place (not same number of digits after decimal) • Compares and orders decimals past the thousandths place • Rounds decimals to the nearest hundredth • Rounds decimals to nearest thousandth • Identifies the place value and value of each digit to the hundredths and thousandths • Applies base ten place value concepts to solve problems using decimals	• Divides numbers by powers of 10 • Multiplies a decimal by 10, 100, 1000 • Divides a decimal by 10, 100, 1000 • Determines the relative magnitude of whole numbers • Writes whole numbers in standard and exponential form • Rounds decimals to the nearest hundredth	
Number and Operations in Base Ten	**Number and Operations in Base Ten**	**Number and Operations in Base Ten**
• Multiplies multiple-digit numbers • Divides a 4-digit number by a 2-digit number • Adds decimals to the hundredths place in horizontal format (not same number of digits) • Adds decimals through the hundred-thousandths place • Subtracts decimals to the hundredths place (not same number of digits) • Subtracts a decimal from a whole number, horizontally • Multiplies a decimal by a decimal, vertical form (factors to tenths or hundredths) • Multiplies a decimal by a decimal (factors to hundredths) • Multiplies a decimal by a decimal (factors to thousandths) • Divides a decimal by a decimal	• Subtracts a decimal from a whole number, horizontally • Divides a whole number by a decimal • Divides a decimal by a decimal	
Number and Operations - Fractions	**Number and Operations - Fractions**	**Number and Operations - Fractions**
• Adds fractions with like denominators with reducing or converting to a mixed fraction • Adds fractions with unlike denominators without reducing	• Adds fractions with unlike denominators with reducing or converting to a mixed fraction	• Solves open sentences with fractions • Identifies the least common multiple of whole numbers

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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Number and Operations - Fractions	Number and Operations - Fractions	Number and Operations - Fractions
• Adds fractions with unlike denominators with reducing or converting to a mixed fraction • Adds simple mixed fractions with unlike denominators (e.g., halves, thirds, fourths, eighths) • Adds mixed fractions where converting from improper fractions is necessary • Subtracts fractions with like denominators with reducing • Subtracts fractions with unlike denominators without reducing • Subtracts fractions with unlike denominators with reducing • Subtracts mixed fractions with unlike denominators with no regrouping • Subtracts whole numbers, fractions, and mixed fractions • Subtracts whole numbers, fractions, and mixed fractions with regrouping • Solves real-world problems involving addition and subtraction of fractions where converting one denominator is necessary • Uses models to multiply and divide fractions and connect the actions to algorithms • Multiplies a fraction by a fraction without reducing to simplest form (complex problem) • Multiplies a fraction by a fraction where reducing to simplest form is necessary • Multiplies a fraction by a whole number • Multiplies mixed fractions • Divides a mixed fraction by a fraction • Solves 1-step real-world problems involving fractions with multiplication and division • Solves 2- or more step real-world problems involving fractions with multiplication and division • Solves problems involving fractions (e.g., multiple operations, conversions) • Solves 1-step problems involving proportions • Identifies a fractions in lowest terms from a region or set • Determines simple equivalent fractions using multiples • Determines equivalent fractions using multiples • Compares fractions (e.g., comparing numerators and denominators) • Uses alternative algorithms to explain the meaning of fraction • Writes a decimal for a shaded region to the hundredths place • Writes a fraction or mixed number as a decimal when the denominator is a multiple of 10	• Adds simple mixed fractions with unlike denominators (e.g., halves, thirds, fourths, eighths) • Adds mixed fractions where converting from improper fractions is necessary • Subtracts whole numbers, fractions, and mixed fractions • Subtracts whole numbers, fractions, and mixed fractions with regrouping • Solves real-world problems involving addition and subtraction of fractions where converting both denominators is necessary • Uses models to multiply and divide fractions and connect the actions to algorithms • Multiplies mixed fractions • Uses models to multiply and divide fractions and mixed fractions and connect the actions to algorithms • Divides a fraction by a whole number • Divides a whole number by a fraction • Divides a mixed fraction by a fraction • Solves 2- or more step real-world problems involving fractions with multiplication and division • Solves problems involving fractions (e.g., multiple operations, conversions) • Compares fractions (e.g., comparing numerators and denominators) • Writes a fraction as a decimal and vice versa • Compares and orders decimal and fractional coordinates on a number line	

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New Vocabulary: short, ten million	*New Vocabulary:* None	*New Vocabulary:* None
New Signs and Symbols: None	*New Signs and Symbols:* ÷ division	*New Signs and Symbols:* None

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