DesCartes: A Continuum of Learning®

Mathematics

Goal: Number and Operations

RIT Score Range: 181 - 190
Statements Last Updated: Mar 10, 2014

Skills and Concepts to Enhance (73% Probability*) 171 - 180	Skills and Concepts to Develop (50% Probability*) 181 - 190	Skills and Concepts to Introduce (27% Probability*) 191 - 200
Understand Place Value, Counting, and Cardinality	**Understand Place Value, Counting, and Cardinality**	**Understand Place Value, Counting, and Cardinality**
• Identifies whole numbers 100 - 999 using base-10 blocks • Identifies the numerical and written name for whole numbers 21 to 100 (e.g., 62 is sixty-two, and vice versa) • Identifies the numeral and written name for whole numbers 101 to 999 (e.g., 342 is three hundred forty-two, and vice versa) • Identifies missing numbers in a series through 100 • Counts backwards from a given number (given number greater than 10) • Recognizes and generates equivalent forms for the same number using physical models for whole numbers 11 to 20 • Compares sets of objects and identifies which is equal to, more than, or less than the other (1 to 10 objects) • Compares whole numbers through 999 • Counts objects that are grouped into tens and ones • Identifies the place value and value of each digit in whole numbers through the tens place	• Identifies the numeral and written name for whole numbers 101 to 999 (e.g., 342 is three hundred forty-two, and vice versa) • Identifies the numeral and written name for whole numbers to 1000 to 9999 (e.g., 3456 is three thousand, four hundred fifty-six, and vice versa) • Identifies the numeral and written name for whole numbers 10,000 to 100,000 • Compares whole numbers through 999 • Rounds 2- and 3- digit whole numbers to the nearest ten • Rounds 3-digit whole numbers to the nearest hundred • Counts objects that are grouped into tens and ones • Identifies whole numbers under 100 given place value terms (e.g., 3 tens and 4 ones = 34) • Identifies the place value and value of each digit in whole numbers through the tens place • Identifies the place value and value of each digit in whole numbers through the hundreds place • Identifies the place value and value of each digit in whole numbers through the thousands • Identifies the place value and value of each digit in whole numbers through the hundred thousands • Compares and orders decimals to the hundredths place (same number of digits after decimal)	• Identifies whole numbers over 999 using base-10 blocks • Identifies the numeral and written name for whole numbers with a zero between digits to the ten thousands place • Identifies the numeral and written name for whole numbers 10,000 to 100,000 • Identifies the numeral and written name for whole numbers over 100,000 • Compares whole numbers to 100, using the symbols for 'less than', 'equal to', or 'greater than' (<, =, >) • Compares whole numbers through the thousands using the symbols <, >, or = • Rounds 2- and 3- digit whole numbers to the nearest ten • Rounds 3-digit whole numbers to the nearest hundred • Identifies whole numbers under 100 given place value terms (e.g., 3 tens and 4 ones = 34) • Identifies the place value and value of each digit in whole numbers through the thousands • Identifies the place value and value of each digit in whole numbers through the hundred thousands • Writes whole numbers in standard and expanded form through the hundreds • Writes whole numbers in standard and expanded form through the thousands
Number and Operations in Base Ten	**Number and Operations in Base Ten**	**Number and Operations in Base Ten**
• Uses models to calculate whole number sums through 999 • Uses strategies for addition facts (e.g., compatible numbers, counting on, doubles, neighbors, making tens) • Adds two or three 2-digit number with regrouping • Adds 1- and/or 2-digit numbers with sums under 100 • Adds 3-digit numbers with no regrouping • Adds 3-digit numbers, with regrouping, with sums under 1000 • Subtracts a 2-digit number from a 2-digit number, with no regrouping • Subtracts 2- and/or 3-digit numbers with no regrouping	• Adds two or three 2-digit number with regrouping • Adds 3-digit numbers, with regrouping, with sums under 1000 • Performs mental computation with 2, 3, or 4 addends • Adds two 3- and/or 4-digit numbers, with regrouping, with sums over 1000 • Adds multiple-digit numbers, with regrouping, with sums over 1000 • Uses models to calculate differences through 100 (whole numbers) • Subtracts a 2-digit number from a 2-digit number, with regrouping • Uses strategies for sums and differences with 2-digit numbers (e.g., decomposing, compatible, compensation, partial sums, counting on) • Subtracts 2- and/or 3-digit numbers with no regrouping • Subtracts 3- or 4-digit numbers with regrouping • Performs mental subtraction with numbers under 1000 • Subtracts multiple-digit numbers with no regrouping • Multiplies a 2-digit number by a 1-digit number with regrouping • Multiplies a 2-digit number by a 2-digit number with no regrouping	• Uses rounding to estimate answers to addition and subtraction problems (whole numbers only) • Adds two 3- and/or 4-digit numbers, with regrouping, with sums over 1000 • Adds multiple-digit numbers, with regrouping, with sums over 1000 • Adds multiple-digit numbers with sums under 1000 • Subtracts 1-digit number from a 2-digit number with regrouping • Subtracts a 2-digit number from a 2-digit number, with regrouping • Uses strategies for sums and differences with 2-digit numbers (e.g., decomposing, compatible, compensation, partial sums, counting on) • Subtracts a 2-digit number from a 3-digit number with a single regrouping • Subtracts 3- or 4-digit numbers with regrouping • Performs mental subtraction with numbers under 1000 • Subtracts multiple-digit numbers with no regrouping • Multiplies a 2- or 3-digit number by a 1-digit number with no regrouping

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 in Base Ten	Number and Operations in Base Ten	Number and Operations in Base Ten
	• Adds decimals to the hundredths place (same number of digits) • Identifies the number that is 1 less than a given number • Compares whole numbers through 9999	• Multiplies a 2-digit number by a 1-digit number with regrouping • Multiplies a 3- or 4-digit number by a 1-digit number • Multiplies a 2-digit number by a 2-digit number with no regrouping • Performs mental computation with multiplication • Divides a 2-digit number by a 1-digit number with no remainder • Adds decimals to the hundredths place (same number of digits) • Adds decimals to the hundredths place in vertical format (not same number of digits) • Adds decimals to the thousandths place vertically with and without regrouping • Subtracts decimals to the hundredths place (same number of digits) with regrouping • Multiplies a decimal by whole number
Number and Operations - Fractions	Number and Operations - Fractions	Number and Operations - Fractions
• Represents 1/2 with a diagram or model • Represents 1/4 with a diagram or model • Identifies one-half from a region or set	• Represents 3/4 with a diagram or model • Identifies 1/2 from a region or set • Identifies one-half from a region or set • Identifies 1/4 from a region or set • Identifies 2/4, 3/4, or 4/4 from a region or set • Identifies 2/3 or 3/3 from a region or set • Identifies tenths from a region or set • Identifies eighths from a region or set • Identifies a fraction (denominators other than 2, 3, 4, 8, 10) from a region or set	• Uses models to add and subtract fractions and connect the actions to algorithms • Subtracts fractions with like denominators without reducing • Solves real-world 1-step problems involving addition and subtraction of fractions with like denominators • Solves real-world 1-step problems involving multiplication or division of a whole number by a fraction • Represents 1/3 with a diagram or model • Represents fractions with denominators other than 2, 3, 4 with a diagram or model • Identifies 1/4 from a region or set • Identifies 1/3 from a region or set • Identifies 2/3 or 3/3 from a region or set • Identifies tenths from a region or set • Identifies a fraction (denominators other than 2, 3, 4, 8, 10) from a region or set • Identifies equivalent fractions using visual representations • Matches numeric and visual representation of equivalent fractions • Explains different interpretations of fractions (e.g., parts of a whole, parts of a set, and division of whole numbers by whole numbers) • Writes the missing number in a proportion using basic facts
New Vocabulary: fourth, hundred, thirds, thousand	*New Vocabulary:* closest, digit, hundreds, million, nearest, one, ten thousand	*New Vocabulary:* billion, hundred million, quintillion, standard numeral, trillion
New Signs and Symbols: None	*New Signs and Symbols:* { } set notation, $ dollar sign, - subtraction	*New Signs and Symbols:* °F degrees Fahrenheit, > greater than, < less than, long division symbol, R remainder

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