Mathematics $\quad$ RIT Score Range: ${ }^{171-180}$

Goal: The Real and Complex Number Systems

| Skills and Concepts to Enhance (73\% Probability*) |
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| $161-170$ |
| Ratios and Proportional Relationships |
| - Completes a growing arithmetic pattern by naming missing members |

## Perform Operations

- Uses a number line to construct addition facts with sums through 20 (whole numbers)
- Uses models to calculate whole number sums through 99
- Adds two 1-digit numbers with sums to 10 in horizontal format
- Adds two 1-digit numbers with sums between 10 and 19 in horizonta format
- Adds two 1-digit numbers with sums between 10 and 19 in vertical format
- Adds multiple 1-digit numbers
- Uses strategies for addition facts (e.g., compatible numbers, counting on, doubles, neighbors, making tens)
- Adds 1 -digit to multiple-digit number with no regrouping
- Adds 1-digit to multiple-digit number with regrouping
- Adds 2-digit numbers with no regrouping
- Solves real-world whole number addition problems with sums to 20 (result unknown)
- Subtracts two 1-digit numbers horizontally
- Subtracts a 1-digit number from a 2-digit number that is less than 20 (whole numbers only)
- Subtracts two 1-digit numbers vertically
- Subtracts a 2-digit number from a 2-digit number, with no regrouping - Instantly recalls basic multiplication facts where one factor is 0-5 and the other factor is 0-12
- Tells time to the nearest hour
- Tells time to the nearest half hour

Skills and Concepts to Develop (50\% Probability ${ }^{*}$ )
$\frac{171-180}{\text { Ratios and Proportional Relationships }}$
$\cdot$ - Completes a growing arithmetic pattern by naming missing member

- Computes simple conversions among units of time (minutes in an hour, half hour, quarter hour)
Perform Operations
- Uses a number line to construct addition facts with sums through 20 - Uses a number
- 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
- Solves real-world whole number addition problems with sums to 20 (result unknown)
- Solves real-world whole number addition problems with sums to 20 (start unknown)
- Solves real-world whole number addition problems with sums to 100 (result unknown)
- Subtracts a 1-digit number from a 2-digit number that is less than 20 (whole numbers only)
- Subtracts a 1-digit number from a 2-digit number with no regrouping vertically
- Subtracts a 2-digit number from a 2-digit number, with no regrouping - Subtracts 2-and/or 3-digit numbers with no regrouping
- Solves real-world whole number problems involving subtraction with numbers under 20
- Instantly recalls basic multiplication facts where one factor is 0-5 and the other factor is 0-12
- Multiplies basic facts to $10 \times 10$ vertically
- Adds 1-digit numbers with sums to 18 (with parentheses)
- Recognizes addition and subtraction fact families through 18
- Identifies the value of a collection of coins to $\$ 1.00$ (with pictures of coins)
- Identifies the value of a collection of coins and bills to $\$ 10.00$ by counting on (with picture of money)
- Tells time to the nearest hour
- Tells time to the nearest half hour
- Tells time to the nearest 5 minutes
- Connects money with place value

Skills and Concepts to Introduce ( $27 \%$ Probability*) 181-190
Ratios and Proportional Relationships

- Completes arithmetic growth patterns in number tables by identifying the missing elements
- Computes simple conversions among units of time (days, weeks)
Perform Operations
- Uses rounding to estimate answers to real-world problems involving addition of numbers less than 100 (whole numbers only)
- Instantly recalls basic addition facts with sums to 18 in a table
- 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
- Solves real-world whole number addition problems with sums to 20 (result unknown) - with extraneous information given
- Solves real-world whole number addition problems with sums to 100 (result unknown)
- Uses models to calculate differences through 100 (whole numbers) - Instantly recalls basic subtraction facts with minuend less than 10
- 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
- Solves real-world whole number problems involving subtraction with numbers under 20
- Solves real-world whole number problems involving subtraction with numbers 100 and under
- Solves problems using the inverse relationship between addition and subtraction
- Uses counting by multiples for multiplication
- Instantly recalls basic multiplication facts where one factor is 6-12 and the other factor is 0-12
- Multiplies basic facts to $10 \times 10$ vertically
- 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

DesCartes: A Continuum of Learning ${ }^{\circledR}$

RIT Score Range:
Statements Last Updated

| Skills and Concepts to Enhance (73\% Probability*) $161-170$ | Skills and Concepts to Develop (50\% Probability*) 171-180 | Skills and Concepts to Introduce (27\% Probability*) 181-190 |
| :---: | :---: | :---: |
| Perform Operations | Perform Operations | Perform Operations |
|  | - Determines the operation needed from a simple problem | - Solves word problems involving basic whole number multiplication facts to $10 \times 10$ <br> - Uses manipulatives to divide a small set of objects into groups of equal size <br> - Uses sharing for division <br> - Models whole number multiplication and division algorithms (e.g., shows multiplication as repeated addition and division as repeated subtraction) <br> - Models multiplication and division algorithms using arrays (whole numbers) <br> - Instantly recalls division facts with dividend and divisors less than 10 <br> - Solves real-world whole number problems involving addition and subtraction <br> - Recognizes addition and subtraction fact families through 18 <br> - Demonstrates an understanding of the inverse relationship between multiplication and division <br> - Adds decimals to the hundredths place (same number of digits) <br> - Identifies the value of a collection of coins to $\$ 1.00$ (without picture of coins) <br> - Adds money with regrouping <br> - Identifies the value of a collection of coins and bills to $\$ 10.00$ by counting on (with picture of money) <br> - Finds equivalent combinations of coins with the same value <br> - Combines a collection of coins and identifies the correct notation <br> - Makes change to $\$ 1.00$ by counting on or subtracting <br> - Computes with dollars and cents up to and including \$5.00 and converts to decimals (addition/subtraction only) <br> - Computes 1 operation on addition or subtraction real-world problems involving money up to $\$ 5.00$ <br> - Identifies the correct time, given the words, and vice versa <br> - Determines elapsed clock time <br> - Determines elapsed time under 1 hour or to the hour <br> - Determines elapsed time involving whole hours, whole days, whole years <br> - Tells time to the nearest 5 minutes <br> - Determines the operation needed from a simple problem <br> - Identifies the number that is 1 less than a given number <br> - Distinguishes between odd and even numbers |
| Extend and Use Properties | Extend and Use Properties | Extend and Use Properties |
| - Identifies whole numbers under 100 using base-10 blocks | - Identifies whole numbers 100-999 using base-10 blocks |  |
| Explanatory Notes <br> * 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. |  |  |
| Generated 6/5/14, 2:46:31 PM © 2006-201 | Evaluation Association. All rights reserved. Please refer to the DesCart | ment for terms of use. Page 2 of |

Mathematics $\quad$ RIT Score Range: 171 - 180

Goal: The Real and Complex Number Systems

| Skills and Concepts to Enhance (73\% Probability*) $161-170$ | Skills and Concepts to Develop (50\% Probability*) 171-180 | Skills and Concepts to Introduce (27\% Probability*) 181-190 |
| :---: | :---: | :---: |
| Extend and Use Properties | Extend and Use Properties | Extend and Use Properties |
| - Identifies the numerical and written name for whole numbers 11 to 20 (e.g., 15 is fifteen, and vice versa) <br> - Counts 1 to 10 objects <br> - Identifies missing numbers in a series through 100 <br> - Recognizes and generates equivalent forms for the same number using physical models for whole numbers 11 to 20 <br> - Orders whole numbers less than 10 <br> - Writes whole numbers in standard and expanded form through the tens | - Identifies the numerical and written name for whole numbers 21 to 100 (e.g., 62 is sixty-two, and vice versa) <br> - Identifies the numeral and written name for whole numbers 101 to 999 (e.g., 342 is three hundred forty-two, and vice versa) <br> - Identifies missing numbers in a series through 100 <br> - Counts by 2's to 100 <br> - Counts backwards from a given number (given number greater than 10) <br> - Recognizes and generates equivalent forms for the same number using physical models for whole numbers 11 to 20 <br> - Compares sets of objects and identifies which is equal to, more than, or less than the other ( 1 to 10 objects) <br> - Compares whole numbers through 999 <br> - Counts objects that are grouped into tens and ones <br> - Identifies the place value and value of each digit in whole numbers through the tens place <br> - Represents $1 / 2$ with a diagram or model <br> - Represents $1 / 4$ with a diagram or model <br> - Identifies one-half from a region or set | - Identifies the numeral and written name for whole numbers 101 to 999 (e.g., 342 is three hundred forty-two, and vice versa) <br> - 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) <br> - Identifies the numeral and written name for whole numbers 10,000 to 100,000 <br> - Compares whole numbers through 999 <br> - Compares whole numbers through 9999 <br> - Rounds 2-and 3-digit whole numbers to the nearest ten <br> - Rounds 3-digit whole numbers to the nearest hundred <br> - Counts objects that are grouped into tens and ones <br> - Identifies whole numbers under 100 given place value terms (e.g., 3 tens and 4 ones = 34) <br> - Identifies the place value and value of each digit in whole numbers through the tens place <br> - Identifies the place value and value of each digit in whole numbers through the hundreds place <br> - Identifies the place value and value of each digit in whole numbers through the thousands <br> - Identifies the place value and value of each digit in whole numbers through the hundred thousands <br> - Represents $3 / 4$ with a diagram or model <br> - Identifies equal parts by using models <br> - Identifies $1 / 2$ from a region or set <br> - Identifies one-half from a region or set <br> - Identifies $1 / 4$ from a region or set <br> - Identifies $2 / 4,3 / 4$, or $4 / 4$ from a region or set <br> - Identifies $2 / 3$ or $3 / 3$ from a region or set <br> - Identifies tenths from a region or set <br> - Identifies eighths from a region or set <br> - Identifies a fraction (denominators other than 2, 3, 4, 8, 10) from a region or set <br> - Compares and orders decimals to the hundredths place (same number of digits after decimal) |
| New Vocabulary: None | New Vocabulary: fact family, fourth, hundred, morning, thirds, thousand | New Vocabulary: changed, clock, closest, digit, fourths, gave, half past, how much time, hundreds, left, left over, million, nearest, noon, o'clock, one, pennies, quarter past, quarter to, row, ten thousand, unifix cubes, what time |
| New Signs and Symbols: + addition, $=$ is equal to, $\times$ multiplication, subtraction, : used with time, variable | New Signs and Symbols: ( ) order of operations, a.m., \& cent sign, \$ dollar sign, p.m., \| tally mark |  |
|  |  | New Signs and Symbols: $\}$ set notation, $\div$ division, long division symbol, : used with time, : used with time |

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