

Math DesCartes: Estimation and Accurate Computations

Skills: Whole Numbers – Multiplication and Division

Students:	DesCartes Skills: <small>(Highlight the skills related to your chosen standard/concept)</small>	
	<p>RIT 231-240:</p> <ul style="list-style-type: none"> Divides multiple-digit numbers Predicts the relative size of the answer when dividing a smaller whole number by a larger whole number Models algorithms using place value concepts (multiplication and division with whole numbers) Uses appropriate algorithms to represent multiplication or division with whole numbers 	<ul style="list-style-type: none"> Solves complex word problems involving whole number division with remainder (e.g., 2-step, 2-digit divisor) Solves real-world problems involving 2-step multiple operations, whole numbers only Solves real-world multiple-step problems involving whole numbers Predicts the relative size of the answer when multiplying whole numbers Predicts the relative size of the answer when computing with 10's, 100's, 1000's
	<p>RIT 221-230:</p> <ul style="list-style-type: none"> Multiplies multiple-digit numbers Divides a 4-digit number by a 2-digit number Divides multiple-digit numbers Uses division for multiple-step problems Divides numbers by powers of 10 Uses multiplication strategies to develop computational fluency (e.g., doubles, 9-patterns, decomposing, partial products) Uses number sense strategies to judge the reasonableness of given answers (multiplication/division only) Solves complex word problems involving whole number division with remainder (e.g., 2-step, 2-digit divisor) Solves real-world multiple-step problems involving whole numbers Predicts the relative size of the answer when dividing whole numbers Models algorithms using place value concepts (multiplication and division with whole numbers) 	<p>RIT 201-210:</p> <ul style="list-style-type: none"> Instantly recalls basic multiplication facts where one factor is 6-12 and the other factor is 0-12 Instantly recalls basic multiplication and division facts in a table 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 multiple 1-digit numbers Multiplies a 2-digit number by a 2-digit number with no regrouping Multiplies a 2-digit number by a 2-digit number with regrouping Multiplies a 3-digit number by a 2-digit number with regrouping Multiplies a 3-digit number by a 3-digit number Multiplies a 2- or 3-digit number by multiples of 10 or 100 Instantly recalls division facts with dividend and divisors less than 13 Divides a 1-digit number by a 1-digit number, with a remainder Divides a 2-digit number by a 1-digit number, with no remainder Divides a 2-digit number or a 3-digit number by a 1-digit number, with a remainder Divides a 3-digit number by a 1-digit number, with no remainder Divides a 4-digit number by a 1-digit number, with no remainder Divides a 4-digit number by a 1-digit number, with a remainder Divides a 2-digit number by a 2-digit number, with a remainder Divides a 3-digit number by a multiple of 10 Divides a 4-digit number by a 2-digit number Evaluates a numerical equation involving more than one operation Performs mental computation with multiplication Performs mental computation with division Solves word problems involving whole number multiplication with numbers greater than 10×10 Solves word problems with whole number division facts with dividend and divisors less than 11 Solves whole number word problems with division over 10×10 Solves simple word problems involving whole number division with remainder (e.g., 1-step, 1-digit divisor) Solves real-world problems involving 2-step multiple operations, whole numbers only
	<p>RIT 211-220:</p> <ul style="list-style-type: none"> Instantly recalls basic multiplication and division facts in a table Multiplies a 2-digit number by a 2-digit number with regrouping Multiplies a 3-digit number by a 2-digit number with regrouping Multiplies a 3-digit number by a 3-digit number Multiplies multiple-digit numbers Multiplies a 4- or more digit number by multiples of 100 or 1000 Divides a 2-digit number or a 3-digit number by a 1- digit number, with a remainder Divides a 4-digit number by a 1-digit number, with no remainder Divides a 4-digit number by a 1-digit number, with a remainder Divides a 3-digit number by a 2-digit number Divides a 4-digit number by a 2-digit number Divides a whole number by a whole number and expresses the remainder as a decimal Divides multiple-digit numbers Evaluates a numerical equation involving more than one operation Uses strategies to determine 2 or more missing digits (multiplication/division only) Solves problems using the inverse relationship between multiplication and division Uses number sense strategies to solve problems (multiplication/division) Evaluates number sense strategies used to solve problems Performs mental computation with multiplication Performs mental computation with division Solves whole number word problems with division over 10×10 	<p>RIT 191-200:</p> <ul style="list-style-type: none"> Instantly recalls basic multiplication facts where one factor is 6-12 and the other factor is 0-12 Multiplies a 2- or 3-digit number by a 1-digit number with no regrouping Multiplies a 2-digit number by a 1-digit number with regrouping

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	<ul style="list-style-type: none"> • 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 • Multiplies a 3-digit number by a 2-digit number with no regrouping • Instantly recalls division facts with dividend and divisors less than 10 • Instantly recalls division facts with dividend and divisors less than 13 • Divides a 2-digit number by a 1-digit number, with no remainder • Uses strategies to determine 1 missing digit (multiplication/division only) • Uses repeated subtraction for division • Performs mental computation with multiplication • Solves word problems involving basic whole number multiplication facts to 10×10 • Solves word problems involving whole number multiplication with numbers greater than 10×10 • Solves word problems with whole number division facts with dividend and divisors less than 11 • Solves simple word problems involving whole number
	<p>RIT 181-190:</p> <ul style="list-style-type: none"> • Multiplies basic facts to 10×10 vertically • Multiplies a 2-digit number by a 1-digit number with regrouping • Instantly recalls division facts with dividend and divisors less than 10 • Uses sharing for division • Solves word problems involving basic whole number multiplication facts to 10×10 • Solves word problems with whole number division facts with dividend and divisors less than 11, involving money
	<p>RIT 171-180:</p> <ul style="list-style-type: none"> • Instantly recalls basic multiplication facts where one factor is 0-5 and the other factor is 0-12 • Multiplies basic facts to 10×10 vertically
	<p>RIT 161-170:</p> <ul style="list-style-type: none"> • Instantly recalls basic multiplication facts where one factor is 0-5 and the other factor is 0-12

Lesson Title:

Standard/Concept for All:

For Students Ready for a Challenge:

Lesson/Activity:

Resources:

Means of Assessment:

For Most Students:

Lesson/Activity:

Resources:

Means of Assessment:

For Students Needing Extra Support:

Lesson/Activity:

Resources:

Means of Assessment:

Closure/Summary for All:

