



# IMPACT

## Mathematics

**COURSE 2**

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STANDARDS	PAGE REFERENCES
Number & Operation	
<p><b>Read, write, represent and compare positive and negative rational numbers, expressed as integers, fractions and decimals.</b></p>	
<p><b>7.1.1.1</b>                      Know that every rational number can be written as the ratio of two integers or as a terminating or repeating decimal. Recognize that <math>\pi</math> is not rational, but that it can be approximated by rational numbers such as <math>\frac{22}{7}</math> and 3.14.</p>	<p><b>Student Edition:</b>                      318-319, 320-323, 324-327, 328-330, 331-335, 336-338, 339-342  <i>Review &amp; Self-Assessment</i> 361-365  <b>Teacher Edition:</b>                      AA 329; DU 338; I 320, 331; QQ 330; RAL 322; T 338; TD 320; TT 325; WU 323</p>

STANDARDS	PAGE REFERENCES
<p>7.1.1.2</p> <p>Understand that division of two integers will always result in a rational number. Use this information to interpret the decimal result of a division problem when using a calculator.</p> <p><i>For example:</i> <math>\frac{125}{30}</math> gives 4.16666667 on a calculator. This answer is not exact. The exact answer can be expressed as <math>4\frac{1}{6}</math>, which is the same as <math>4.\overline{16}</math>. The calculator expression does not guarantee that the 6 is repeated, but that possibility should be anticipated.</p>	<p><b>Student Edition:</b> 318-319, 320-323, 324-327, 328-330, 331-335, 336-338</p> <p><i>Review &amp; Self-Assessment</i> 361-365</p> <p><b>Teacher Edition:</b> AA 327, 340; DU 335, 338; E 363, 364; OSA 325; QQ 342; RAL 324; RN 320; TD 320</p>
<p>7.1.1.3</p> <p>Locate positive and negative rational numbers on the number line, understand the concept of opposites, and plot pairs of positive and negative rational numbers on a coordinate grid.</p>	<p><b>Student Edition:</b> 124-125, 131-133, 134-139, 148-153, 319, 324-327, 328-330</p> <p><i>Review &amp; Self-Assessment</i> 363 #22</p> <p><b>Teacher Edition:</b> AA 135, 327; DU 325, 327; I 134; OSA 325; QQ 330; RAL 324; TD 136, 324; TT 135</p>
<p>7.1.1.4</p> <p>Compare positive and negative rational numbers expressed in various forms using the symbols <math>&lt;</math>, <math>&gt;</math>, <math>\leq</math>, <math>\geq</math>.</p> <p><i>For example:</i> <math>-\frac{1}{2} &lt; -0.36</math>.</p>	<p><b>Student Edition:</b> 143-145, 148-153, 324-327, 328-330</p> <p><i>Review &amp; Self-Assessment</i> 361-365</p> <p><b>Teacher Edition:</b> DU 144, 327; E 151; OSA 143; QQ 330; RAL 143, 324</p>
<p>7.1.1.5</p> <p>Recognize and generate equivalent representations of positive and negative rational numbers, including equivalent fractions.</p> <p><i>For example:</i> <math>-\frac{40}{12} = -\frac{120}{36} = -\frac{10}{3} = -3.\overline{3}</math>.</p>	<p><b>Student Edition:</b> 140-142, 148-153, 324-327, 328-330</p> <p><i>Review &amp; Self-Assessment</i> 361-365</p> <p><b>Teacher Edition:</b> AA 327, 329; DU 325, 327; QQ 330; T 326; TD 326</p>
<p><b>Calculate with positive and negative rational numbers, and rational numbers with whole number exponents, to solve real-world and mathematical problems.</b></p>	
<p>7.1.2.1</p> <p>Add, subtract, multiply and divide positive and negative rational numbers that are integers, fractions and terminating decimals; use efficient and generalizable procedures, including standard algorithms; raise positive rational numbers to whole-number exponents.</p> <p><i>For example:</i> <math>3^4 \times \left(\frac{1}{2}\right)^2 = \frac{81}{4}</math>.</p>	<p><b>Student Edition:</b> 93-96, 96-100, 100-103, 104-106, 134-139, 148-153, 155-156, 157-159, 160-161, 165-168</p> <p><i>Review &amp; Self-Assessment</i> 120-123, 169-171</p> <p><b>Teacher Edition:</b> DU 100, 159; MB 155; ML 99; QQ 153, 168; RAL 160; TD 157</p>

STANDARDS	PAGE REFERENCES
<p>7.1.2.2</p> <p>Use real-world contexts and the inverse relationship between addition and subtraction to explain why the procedures of arithmetic with negative rational numbers make sense.</p> <p><i>For example:</i> Multiplying a distance by -1 can be thought of as representing that same distance in the opposite direction. Multiplying by -1 a second time reverses directions again, giving the distance in the original direction.</p>	<p><b>Student Edition:</b> 124-125, 126-127, 128-130, 131-133, 134, 139, 140-142, 145-147, 148-153</p> <p><i>Review &amp; Self-Assessment</i> 169-171</p> <p><b>Teacher Edition:</b> DU 137, 140; E 130; HA 125; I 124, 126, 128, 131; MB 124B; T 130; TD 127, 141</p>
<p>7.1.2.3</p> <p>Understand that calculators and other computing technologies often truncate or round numbers.</p> <p><i>For example:</i> A decimal that repeats or terminates after a large number of digits is truncated or rounded.</p>	<p><b>Student Edition:</b> 340 #29</p> <p><i>Develop &amp; Understand</i> 335, 336, 337</p> <p><i>Think &amp; Discuss</i> 333</p> <p><b>Teacher Edition:</b> AA 340; DU 335, 336; MB 318B; OSA 335; TD 333; TT 337; WU 335</p>
<p>7.1.2.4</p> <p>Solve problems in various contexts involving calculations with positive and negative rational numbers and positive integer exponents, including computing simple and compound interest.</p>	<p><b>Student Edition:</b> 93-96, 96-100, 100-103, 104-106, 134-139, 148-153, 155-156, 157-159, 160-161, 165-168, 540-543, 544-546</p> <p><i>Review &amp; Self-Assessment</i> 120-123, 169-171</p> <p><b>Teacher Edition:</b> DU 100, 159, 543; MB 155; ML 99; OSA 544; QQ 153, 168; RAL 160; TD 157</p>
<p>7.1.2.5</p> <p>Use proportional reasoning to solve problems involving ratios in various contexts.</p> <p><i>For example:</i> A recipe calls for milk, flour and sugar in a ratio of 4:6:3 (this is how recipes are often given in large institutions, such as hospitals). How much flour and milk would be needed with 1 cup of sugar?</p>	<p><b>Student Edition:</b> 377-379, 380-381, 382-388, 494, 495-497, 497-499, 500-504, 505-507, 508-513, 514-516, 517-518, 519-521, 522-529, 530-533, 534-536, 537-539</p> <p><i>Review &amp; Self-Assessment</i> 551-555</p> <p><b>Teacher Edition:</b> AA 387; DU 378; I 377; MB 506; PR 505; QQ 388, 529</p>

STANDARDS	PAGE REFERENCES
<p>7.1.2.6</p> <p>Demonstrate an understanding of the relationship between the absolute value of a rational number and distance on a number line. Use the symbol for absolute value.</p> <p><i>For example:</i> <math> -3 </math> represents the distance from <math>-3</math> to <math>0</math> on a number line or <math>3</math> units; the distance between <math>3</math> and <math>\frac{9}{2}</math> on the number line is <math> 3 - \frac{9}{2} </math> or <math>\frac{3}{2}</math>.</p>	<p><b>Student Edition:</b> 126-127, 147 #12, 151 #56, 397</p> <p><b>Teacher Edition:</b> AA 147, 397; I 126; MB 124B; TD 127</p>
Algebra	
<p><b>Understand the concept of proportionality in real-world and mathematical situations, and distinguish between proportional and other relationships.</b></p>	
<p>7.2.1.1</p> <p>Understand that a relationship between two variables, <math>x</math> and <math>y</math>, is proportional if it can be expressed in the form <math>\frac{y}{x}=k</math> or <math>y=kx</math>. Distinguish proportional relationships from other relationships, including inversely proportional relationships (<math>xy=k</math> or <math>y=\frac{k}{x}</math>).</p> <p><i>For example:</i> The radius and circumference of a circle are proportional, whereas the length <math>x</math> and the width <math>y</math> of a rectangle with area <math>12</math> are inversely proportional, since <math>xy = 12</math> or equivalently, <math>y=\frac{12}{x}</math>.</p>	<p><b>Student Edition:</b> 377-379, 380-381, 382-388, 398-401</p> <p><i>Review &amp; Self-Assessment</i> 431-433</p> <p><b>Teacher Edition:</b> I 377; MP 380; OSA 379; QC 388; QQ 388; RAL 378; TD 378; WDYL 381; WU 378, 379, 398</p>
<p>7.2.1.2</p> <p>Understand that the graph of a proportional relationship is a line through the origin whose slope is the unit rate (constant of proportionality). Know how to use graphing technology to examine what happens to a line when the unit rate is changed.</p>	<p><b>Student Edition:</b> 390-393, 394-396, 396-397, 402-409</p> <p><i>Review &amp; Self-Assessment</i> 431-433</p> <p><b>Teacher Edition:</b> AA 403; E 393; I 396; ML 398; RAL 393, 396; SS 393, 397; TD 393; WU 392, 394</p>

## STANDARDS

## PAGE REFERENCES

**Recognize proportional relationships in real-world and mathematical situations; represent these and other relationships with tables, verbal descriptions, symbols and graphs; solve problems involving proportional relationships and explain results in the original context.**

## 7.2.2.1

Represent proportional relationships with tables, verbal descriptions, symbols, equations and graphs; translate from one representation to another. Determine the unit rate (constant of proportionality or slope) given any of these representations.

*For example:* Larry drives 114 miles and uses 5 gallons of gasoline. Sue drives 300 miles and uses 11.5 gallons of gasoline. Use equations and graphs to compare fuel efficiency and to determine the costs of various trips.

**Student Edition:**

377-379, 380-381, 382-388, 389, 390-393, 394-395, 396-397, 403-409, 505-507, 508-510, 510-513, 530-533

*Review & Self-Assessment* 431-433, 551-555

**Teacher Edition:**

AA 379, 532; DU 378; I 377; OSA 379; T 378, 507

## 7.2.2.2

Solve multi-step problems involving proportional relationships in numerous contexts.

*For example:* Distance-time, percent increase or decrease, discounts, tips, unit pricing, lengths in similar geometric figures, and unit conversion when a conversion factor is given, including conversion between different measurement systems.

*Another example:* How many kilometers are there in 26.2 miles?

**Student Edition:**

505-507, 508-509, 510-513, 514-516, 517-518, 519-521, 522-529, 530-533, 534-536, 537-539, 540-543, 544-546, 547-550

**Teacher Edition:**

AA 517, 521; DU 535; OSA 509; QQ 539; T 511, 515; TD 505

## 7.2.2.3

Use knowledge of proportions to assess the reasonableness of solutions.

*For example:* Recognize that it would be unreasonable for a cashier to request \$200 if you purchase a \$225 item at 25% off.

**Student Edition:**

519-521, 525 #15, 526 #18, 528 #26, 538 #24, 543 #8, 549 #13

*Share & Summarize* 533, 543

**Teacher Edition:**

AA 526, 528; CH 521; E 525, 526; QQ 529, 539; SS 533

STANDARDS	PAGE REFERENCES
<p>7.2.2.4</p> <p>Represent real-world or mathematical situations using equations and inequalities involving variables and positive and negative rational numbers.</p> <p><i>For example:</i> "Four-fifths is three greater than the opposite of a number" can be represented as <math>\frac{4}{5} = -n + 3</math>, and "height no bigger than half the radius" can be represented as <math>h \leq \frac{r}{2}</math>.</p> <p><i>Another example:</i> "x is at least -3 and less than 5" can be represented as <math>-3 \leq x &lt; 5</math>, and also on a number line.</p>	<p><b>Student Edition:</b> 434, 437-439, 444-445, 449-452, 453-454, 455-459, 462, 466-468, 469-473 <i>Review &amp; Self-Assessment</i> 489-491</p> <p><b>Teacher Edition:</b> AA 439; DU 468; E 444, 450; I 434; ML 466; QQ 445, 459, 473; RAL 439; SS 452</p>
<p><b>Apply understanding of order of operations and algebraic properties to generate equivalent numerical and algebraic expressions containing positive and negative rational numbers and grouping symbols; evaluate such expressions.</b></p>	
<p>7.2.3.1</p> <p>Use properties of algebra to generate equivalent numerical and algebraic expressions containing rational numbers and whole number exponents. Properties of algebra include associative, commutative and distributive laws.</p> <p><i>For example:</i> Combine like terms (use the distributive law) to write <math>3x - 7x + 1 = (3 - 7)x + 1 = -4x + 1</math>.</p>	<p><b>Student Edition:</b> 51-52, 53-55, 56-59, 60-62, 63-68, 91 #42-#45, 255 #42-#47, 480, 481, 482, 529 #28-#33 <i>Review and Self-Assessment</i> 69-71</p> <p><b>Teacher Edition:</b> AA 54, 350; DU 16; I 17, 32, 60; OSA 231; QQ 48, 68; RAL 16, 33; T 15</p>
<p>7.2.3.2</p> <p>Evaluate algebraic expressions containing rational numbers and whole number exponents at specified values of their variables.</p> <p><i>For example:</i> Evaluate the expression <math>\frac{1}{3}(2x - 5)^2</math> at <math>x = 5</math>.</p>	<p><b>Student Edition:</b> 11, 12-16, 21-29, 32-34, 35-39, 40-42, 43-48, 51-55, 56-59, 60-62, 63-68, 91 #42-#45, 255 #42-#47, 480, 481, 482, 529 #28-#33 <i>Review &amp; Self-Assessment</i> 69-71</p> <p><b>Teacher Edition:</b> AA 54; DU 16, 481; I 9, 17, 32, 56, 60; QQ 48, 68; RAL 7, 16, 33; T 10, 15</p>
<p>7.2.3.3</p> <p>Apply understanding of order of operations and grouping symbols when using calculators and other technologies.</p> <p><i>For example:</i> Recognize the conventions of using a carat (^ raise to a power), asterisk (* multiply), and also pay careful attention to the use of nested parentheses.</p>	<p><b>Student Edition:</b> 40-42, 182-184, 185-187, 190, 200-201, 335, 336, 440-443 <i>Think &amp; Discuss</i> 13</p> <p><b>Teacher Edition:</b> DU 183; E 190; OSA 335; SS 184; T 182; TD 13, 182; WU 335</p>

## STANDARDS

## PAGE REFERENCES

**Represent real-world and mathematical situations using equations with variables. Solve equations symbolically, using the properties of equality. Also solve equations graphically and numerically. Interpret solutions in the original context.**

7.2.4.1

Represent relationships in various contexts with equations involving variables and positive and negative rational numbers. Use the properties of equality to solve for the value of a variable. Interpret the solution in the original context.

*For example:* Solve for  $w$  in the equation  $P = 2w + 2\ell$  when  $P = 3.5$  and  $\ell = 0.4$ .

*Another example:* To post an Internet website, Mary must pay \$300 for initial set up and a monthly fee of \$12. She has \$842 in savings, how long can she sustain her website?

**Student Edition:**

35-39, 40-42, 43-48, 435, 437-439, 449-452, 455-459, 475-476, 484-488

*Review & Self-Assessment* 489-491

**Teacher Edition:**

AA 439, 475, 476, 489; DU 36, 475; QQ 459; RAL 439; SS 39

7.2.4.2

Solve equations resulting from proportional relationships in various contexts.

*For example:* Given the side lengths of one triangle and one side length of a second triangle that is similar to the first, find the remaining side lengths of the second triangle.

*Another example:* Determine the price of 12 yards of ribbon if 5 yards of ribbon cost \$1.85.

**Student Edition:**

505-507, 508-509, 510-513, 514-516, 517-518, 519-521, 522-529, 530-533, 534-536, 537-539, 540-543, 544-546, 547-550

**Teacher Edition:**

AA 517, 521; DU 535; OSA 509; QQ 539; T 511, 515; TD 505

## Geometry &amp; Measurement

**Use reasoning with proportions and ratios to determine measurements, justify formulas and solve real-world and mathematical problems involving circles and related geometric figures.**

7.3.1.1

Demonstrate an understanding of the proportional relationship between the diameter and circumference of a circle and that the unit rate (constant of proportionality) is  $\pi$ . Calculate the circumference and area of circles and sectors of circles to solve problems in various contexts.

**Student Edition:**

217, 219, 220-222, 224, 226, 230-233, 233-234, 235-239, 338 #13, 341 #30-#33

*Review & Self-Assessment* 256-259

**Teacher Edition:**

AA 226, 234; E 217, 338, 341; OSA 217, 231; QQ 227

STANDARDS	PAGE REFERENCES
<p>7.3.1.2</p> <p>Calculate the volume and surface area of cylinders and justify the formulas used.</p> <p><i>For example:</i> Justify the formula for the surface area of a cylinder by decomposing the surface into two circles and a rectangle.</p>	<p><b>Student Edition:</b> 212-215, 216-219, 220-222, 223-227, 229-230, 231-232, 233-234, 235-239, 277 #14-#16, 338 #13, <i>Review and Self-Assessment</i> 256-259</p> <p><b>Teacher Edition:</b> DU 216, 231, 234, 338; I 230; RAL 232; T 233; TD 212</p>
<p>Analyze the effect of change of scale, translations and reflections on the attributes of two-dimensional figures.</p>	
<p>7.3.2.1</p> <p>Describe the properties of similarity, compare geometric figures for similarity, and determine scale factors.</p> <p><i>For example:</i> Corresponding angles in similar geometric figures have the same measure.</p>	<p><b>Student Edition:</b> 514-516, 517-518, 519-521, 522-529 <i>Review &amp; Self-Assessment</i> 551-555</p> <p><b>Teacher Edition:</b> AA 517, 521, 528; DU 518; E 516, 517, 528; QQ 529; SS 520; TD 514</p>
<p>7.3.2.2</p> <p>Apply scale factors, length ratios and area ratios to determine side lengths and areas of similar geometric figures.</p> <p><i>For example:</i> If two similar rectangles have heights of 3 and 5, and the first rectangle has a base of length 7, the base of the second rectangle has length <math>\frac{35}{3}</math>.</p>	<p><b>Student Edition:</b> 514-516, 517-518, 519-521, 522-529 <i>Review &amp; Self-Assessment</i> 551-555</p> <p><b>Teacher Edition:</b> AA 517, 521, 528; DU 518; E 516, 517, 528; QQ 529; SS 520; TD 514</p>
<p>7.3.2.3</p> <p>Use proportions and ratios to solve problems involving scale drawings and conversions of measurement units.</p> <p><i>For example:</i> 1 square foot equals 144 square inches.</p> <p><i>Another example:</i> In a map where 1 inch represents 50 miles, <math>\frac{1}{2}</math> inch represents 25 miles.</p>	<p><b>Student Edition:</b> 514-517, 522-529, 544-546, 547-550 <i>Review &amp; Self-Assessment</i> 551-555</p> <p><b>Teacher Edition:</b> AA 526, 549; DU 515, 545, 546; E 516, 555; OSA 514, 544; QQ 529, 550; RAL 516; T 515, 545</p>
<p>7.3.2.4</p> <p>Graph and describe translations and reflections of figures on a coordinate grid and determine the coordinates of the vertices of the figure after the transformation.</p> <p><i>For example:</i> The point (1, 2) moves to (-1, 2) after reflection about the y-axis.</p>	<p>See <i>Math Connects: Concepts, Skills, and Problem Solving, Course 2</i> © 2009.</p> <p><b>Student Edition:</b> 553-557, 558-562, 566, 696, 713 #12-#13, 721 #9, 724 #11, 729 #13, 743-744 <i>Geometry Lab</i> 552 <i>Practice Test</i> 567 #15-#16</p> <p><b>Teacher Edition:</b> AA 561; AE 554, 555, 559; FMC 554; PA 556; T 552; TNT 554</p>

STANDARDS	PAGE REFERENCES
<b>Data Analysis &amp; Probability</b>	
<b>Use mean, median and range to draw conclusions about data and make predictions.</b>	
<p>7.4.1.1</p> <p>Design simple experiments and collect data. Determine mean, median and range for quantitative data and from data represented in a display. Use these quantities to draw conclusions about the data, compare different data sets, and make predictions.</p> <p><i>For example:</i> By looking at data from the past, Sandy calculated that the mean gas mileage for her car was 28 miles per gallon. She expects to travel 400 miles during the next week. Predict the approximate number of gallons that she will use.</p>	<p><b>Student Edition:</b> 162-164, 166, 281, 302-305, 306-308, 311 #5, 312 #8 <i>Review and Self-Assessment</i> 170 #16-#20, 316 #15</p> <p><b>Teacher Edition:</b> AA 163; DU 163; 304; 308; OSA 164; RAL 162; SS 164; T 162, 164; WU 305</p>
<p>7.4.1.2</p> <p>Describe the impact that inserting or deleting a data point has on the mean and the median of a data set. Know how to create data displays using a spreadsheet to examine this impact.</p> <p><i>For example:</i> How does dropping the lowest test score affect a student's mean test score?</p>	<p><b>Student Edition:</b> 164 #22, #24, 166 #33, 167 #50-#51 <i>Share &amp; Summarize</i> 164 <i>Think &amp; Discuss</i> 163</p> <p><b>Teacher Edition:</b> AA 164, 166; TD 163</p>
<b>Display and interpret data in a variety of ways, including circle graphs and histograms.</b>	
<p>7.4.2.1</p> <p>Use reasoning with proportions to display and interpret data in circle graphs (pie charts) and histograms. Choose the appropriate data display and know how to create the display using a spreadsheet or other graphing technology.</p>	<p><b>Student Edition:</b> 294, 295-298, 299-301, 302-305, 306-308, 309-313 <i>Review &amp; Self-Assessment</i> 316-317</p> <p><b>Teacher Edition:</b> AA 309, 316; DU 304; E 303; I 299; OSA 296; QQ 313; SS 301, 305; T 299; TD 294, 297</p>
<b>Calculate probabilities and reason about probabilities using proportions to solve real-world and mathematical problems.</b>	
<p>7.4.3.1</p> <p>Use random numbers generated by a calculator or a spreadsheet or taken from a table to simulate situations involving randomness, make a histogram to display the results, and compare the results to known probabilities.</p> <p><i>For example:</i> Use a spreadsheet function such as <code>RANDBETWEEN(1, 10)</code> to generate random whole numbers from 1 to 10, and display the results in a histogram.</p>	<p><b>Student Edition:</b> 264-267, 279-280, 280-282, 286-293, 294, 295-298</p> <p><b>Teacher Edition:</b> AA 292, 295, 296; DU 295; E 296, 297; I 264; ML 267; OL 260E; RAL 265, 266; SS 280, 282; T 294</p>

STANDARDS	PAGE REFERENCES
<p>7.4.3.2</p> <p>Calculate probability as a fraction of sample space or as a fraction of area. Express probabilities as percents, decimals and fractions.</p> <p><i>For example:</i> Determine probabilities for different outcomes in game spinners by finding fractions of the area of the spinner.</p>	<p><b>Student Edition:</b> 260-261, 262-264, 264-267, 270-271, 272-277, 342 #36</p> <p><i>Review &amp; Self-Assessment</i> 314-317</p> <p><b>Teacher Edition:</b> AA 271; DU 263; E 271; HA 261; I 262; MB 260B; QQ 277; RAL 266, 267; SS 264; T 269; TD 262; WU 269</p>
<p>7.4.3.3.</p> <p>Use proportional reasoning to draw conclusions about and predict relative frequencies of outcomes based on probabilities.</p> <p><i>For example:</i> When rolling a number cube 600 times, one would predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times.</p>	<p><b>Student Edition:</b> 264-267, 268-269, 270-271, 272-277, 279-280, 459 #17</p> <p><i>Review &amp; Self-Assessment</i> 314-317</p> <p><b>Teacher Edition:</b> AA 271, 274; E 273, 274; ML 267; MP 270; QQ 277; RAL 264, 265, 266, 267, 268, 278; T 269, 280</p>
Grade 8	
Number & Operation	
<p><b>Read, write, compare, classify and represent real numbers, and use them to solve problems in various contexts.</b></p>	
<p>8.1.1.1</p> <p>Classify real numbers as rational or irrational. Know that when a square root of a positive integer is not an integer, then it is irrational. Know that the sum of a rational number and an irrational number is irrational, and the product of a non-zero rational number and an irrational number is irrational.</p> <p><i>For example:</i> Classify the following numbers as whole numbers, integers, rational numbers, irrational numbers, recognizing that some numbers belong in more than one category: <math>\frac{6}{3}</math>, <math>\frac{3}{6}</math>, <math>3.\bar{6}</math>, <math>\frac{\pi}{2}</math>, <math>-\sqrt{4}</math>, <math>\sqrt{10}</math>, <math>-6.7</math>.</p>	<p><b>Student Edition:</b> 127, 319, 320-323, 324-327, 328-330, 530-533, 537</p> <p><i>Review &amp; Self-Assessment</i> 361-365</p> <p><b>Teacher Edition:</b> AA 327; E 533; QC 539; QQ 330; RAL 324; TD 127, 326; TT 325</p>

STANDARDS	PAGE REFERENCES
<p>8.1.1.2</p> <p>Compare real numbers; locate real numbers on a number line. Identify the square root of a positive integer as an integer, or if it is not an integer, locate it as a real number between two consecutive positive integers.</p> <p><i>For example:</i> Put the following numbers in order from smallest to largest: 2, <math>\sqrt{3}</math>, -4, -6.8, <math>-\sqrt{37}</math>.</p> <p><i>Another example:</i> <math>\sqrt{68}</math> is an irrational number between 8 and 9.</p>	<p><b>Student Edition:</b> 134-139, 140-142, 324-327, 329 #18-#19, 369-372, 373-376, 377-379, 380-381, 382-388, 390-393, 420-422</p> <p><b>Teacher Edition:</b> AA 384; DU 137, 139, 325, 378, 420, 421; I 134; OSA 379; SS 379; T 326; TD 324; TT 371</p>
<p>8.1.1.3</p> <p>Determine rational approximations for solutions to problems involving real numbers.</p> <p><i>For example:</i> A calculator can be used to determine that <math>\sqrt{7}</math> is approximately 2.65.</p> <p><i>Another example:</i> To check that <math>1\frac{5}{12}</math> is slightly bigger than <math>\sqrt{2}</math>, do the calculation</p> $\left(1\frac{5}{12}\right)^2 = \left(\frac{17}{12}\right)^2 = \frac{289}{144} = 2\frac{1}{144}.$ <p><i>Another example:</i> Knowing that <math>\sqrt{10}</math> is between 3 and 4, try squaring numbers like 3.5, 3.3, 3.1 to determine that 3.1 is a reasonable rational approximation of <math>\sqrt{10}</math>.</p>	<p><b>Student Edition:</b> 324-327, 328-330, 331-335, 336-338, 339-342, 351-354</p> <p><i>Review &amp; Self-Assessment</i> 361-365</p> <p><b>Teacher Edition:</b> AA 327, 340; DU 335, 336, 338; E 325, 364; QQ 342, 360; RAL 324, 334, 336</p>
<p>8.1.1.4</p> <p>Know and apply the properties of positive and negative integer exponents to generate equivalent numerical expressions.</p> <p><i>For example:</i> <math>3^2 \times 3^{(-5)} = 3^{(-3)} \left(\frac{1}{3}\right)^3 = \frac{1}{27}</math>.</p>	<p><b>Student Edition:</b> 93-96, 96-100, 100-103, 104-106, 107-108, 109-110, 111-113, 114-116, 117-119</p> <p><i>Review &amp; Self-Assessment</i> 120-123</p> <p><b>Teacher Edition:</b> MP 114; QQ 106; RAL 95; T 94, 103; TD 97; TO 115; TT 93; WDYL 116</p>

STANDARDS	PAGE REFERENCES
<p>8.1.1.5</p> <p>Express approximations of very large and very small numbers using scientific notation; understand how calculators display numbers in scientific notation. Multiply and divide numbers expressed in scientific notation, express the answer in scientific notation, using the correct number of significant digits when physical measurements are involved.</p> <p><i>For example:</i> <math>(4.2 \times 10^4) \times (8.25 \times 10^3) = 3.465 \times 10^8</math>, but if these numbers represent physical measurements, the answer should be expressed as <math>3.5 \times 10^8</math> because the first factor, <math>4.2 \times 10^4</math>, only has two significant digits.</p>	<p><b>Student Edition:</b> 172-173, 175-177, 178-181, 182-184, 185-187, 188-193, 206 #77-#78, 227 #30-#31, 239 #30-#33, 293 #23-#26</p> <p><i>Review &amp; Self-Assessment</i> 207-209</p> <p><b>Teacher Edition:</b> AE 179; E 190; OSA 175, 181; QQ 193; RAL 177; SS 177; TD 175, 182</p>
Algebra	
<p><b>Understand the concept of function in real-world and mathematical situations, and distinguish between linear and non-linear functions.</b></p>	
<p>8.2.1.1</p> <p>Understand that a function is a relationship between an independent variable and a dependent variable in which the value of the independent variable determines the value of the dependent variable. Use functional notation, such as <math>f(x)</math>, to represent such relationships.</p> <p><i>For example:</i> The relationship between the area of a square and the side length can be expressed as <math>f(x) = x^2</math>. In this case, <math>f(5) = 25</math>, which represents the fact that a square of side length 5 units has area 25 units squared.</p>	<p>The definition of a function can be included in the following lessons.</p> <p><b>Student Edition:</b> 369-373, 373-376, 377-379, 390-393, 394-396, 396-397, 398-401, 402-409, 411-413, 420-422, 423-430</p> <p><i>Review &amp; Self-Assessment</i> 431-433</p> <p><b>Teacher Edition:</b> AA 391, 427, 428; DU 420; QQ 430; RAL 418; SS 413</p>
<p>8.2.1.2</p> <p>Use linear functions to represent relationships in which changing the input variable by some amount leads to a change in the output variable that is a constant times that amount.</p> <p><i>For example:</i> Uncle Jim gave Emily \$50 on the day she was born and \$25 on each birthday after that. The function <math>f(x) = 50 + 25x</math> represents the amount of money Jim has given after <math>x</math> years. The rate of change is \$25 per year.</p>	<p>The definition of a function can be included in the following lessons.</p> <p><b>Student Edition:</b> 369-373, 373-376, 377-379, 390-393, 394-396, 396-397, 398-401, 402-409, 411-413, 420-422, 423-430</p> <p><i>Review &amp; Self-Assessment</i> 431-433</p> <p><b>Teacher Edition:</b> AA 391, 427, 428; DU 420; QQ 430; RAL 418; SS 413</p>

STANDARDS	PAGE REFERENCES
<p>8.2.1.3 Understand that a function is linear if it can be expressed in the form <math>f(x)=mx+b</math> or if its graph is a straight line.</p> <p><i>For example:</i> The function <math>f(x)=x^2</math> is not a linear function because its graph contains the points (1,1), (-1,1) and (0,0), which are not on a straight line.</p>	<p>The definition of a function can be included in the following lessons.</p> <p><b>Student Edition:</b> 414-416, 417-419, 420-422, 423-430 <i>Review &amp; Self-Assessment</i> 431-433</p> <p><b>Teacher Edition:</b> DU 418, 421; O 410A; QC 429; QQ 430; SF 417; TD 414; WU 418</p>
<p>8.2.1.4 Understand that an arithmetic sequence is a linear function that can be expressed in the form <math>f(x)=mx+b</math>, where <math>x = 0, 1, 2, 3, \dots</math></p> <p><i>For example:</i> The arithmetic sequence 3, 7, 11, 15, ..., can be expressed as <math>f(x) = 4x + 3</math>.</p>	<p><b>Student Edition:</b> 5-8, 410, 411-413, 414-416, 417-419, 420-422, 423-430 <i>Review &amp; Self-Assessment</i> 431-433</p> <p><b>Teacher Edition:</b> AA 424, 427; DU 412, 418; E 410; QC 429; QQ 429; SF 417; T 413, 416</p>
<p>8.1.2.5 Understand that a geometric sequence is a non-linear function that can be expressed in the form <math>f(x)=ab^x</math>, where <math>x = 0, 1, 2, 3, \dots</math></p> <p><i>For example:</i> The geometric sequence 6, 12, 24, 48, ..., can be expressed in the form <math>f(x) = 6(2^x)</math>.</p>	<p><b>Student Edition:</b> 5-8, 411-413, 421 #3, 428 #17, 429 #20</p> <p><b>Teacher Edition:</b> AA 411, 429, 421; E 410, 421, 428; O 410A; QQ 430; SF 417; WU 412</p>
<p><b>Recognize linear functions in real-world and mathematical situations; represent linear functions and other functions with tables, verbal descriptions, symbols and graphs; solve problems involving these functions and explain results in the original context.</b></p>	
<p>8.2.2.1 Represent linear functions with tables, verbal descriptions, symbols, equations and graphs; translate from one representation to another.</p>	<p><b>Student Edition:</b> 369-373, 373-376, 377-379, 380-381, 390-393, 394-396, 396-397, 398-401, 411-413, 414-416, 417-419, 420-422 <i>Review &amp; Self-Assessment</i> 431-433</p> <p><b>Teacher Edition:</b> AA 391; DU 394; MP 380; QQ 409; RAL 372, 418; TD 373, 393</p>
<p>8.2.2.2 Identify graphical properties of linear functions including slopes and intercepts. Know that the slope equals the rate of change, and that the <math>y</math>-intercept is zero when the function represents a proportional relationship.</p>	<p><b>Student Edition:</b> 389, 390-393, 394-396, 396-397, 398-401, 402-409, 417-419, 420-422, 423-430 <i>Review &amp; Self-Assessment</i> 431-433</p> <p><b>Teacher Edition:</b> AA 403; I 396; QQ 409, 430; T 394; TD 393; TT 401; WU 392, 398</p>

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<p>8.2.2.3</p> <p>Identify how coefficient changes in the equation <math>f(x) = mx + b</math> affect the graphs of linear functions. Know how to use graphing technology to examine these effects.</p>	<p><b>Student Edition:</b> 398-401, 402-409, 414-416, 417-419, 420-422, 423-430</p> <p><b>Teacher Edition:</b> AA 403; DU 399, 420, 418; ML 398; QQ 430; T 416; TD 417; TT 401; WU 398</p>
<p>8.2.2.4</p> <p>Represent arithmetic sequences using equations, tables, graphs and verbal descriptions, and use them to solve problems.</p> <p><i>For example:</i> If a girl starts with \$100 in savings and adds \$10 at the end of each month, she will have <math>100 + 10x</math> dollars after <math>x</math> months.</p>	<p><b>Student Edition:</b> 5-8, 410, 411-413, 414-416, 417-419, 420-422, 423-430, 488 #56-#57</p> <p><i>Review &amp; Self-Assessment</i> 431-433</p> <p><b>Teacher Edition:</b> AA 424, 427; DU 412, 418; E 410; QC 429; QQ 429; SF 417; T 413, 416</p>
<p>8.2.2.5</p> <p>Represent geometric sequences using equations, tables, graphs and verbal descriptions, and use them to solve problems.</p> <p><i>For example:</i> If a girl invests \$100 at 10% annual interest, she will have <math>100(1.1^x)</math> dollars after <math>x</math> years.</p>	<p><b>Student Edition:</b> 5-8, 411-413, 421 #3, 428 #17, 429 #20</p> <p><b>Teacher Edition:</b> AA 411, 429, 421; E 410, 421, 428; O 410A; QQ 430; SF 417; WU 412</p>
<p><b>Generate equivalent numerical and algebraic expressions and use algebraic properties to evaluate expressions.</b></p>	
<p>8.2.3.1</p> <p>Evaluate algebraic expressions, including expressions containing radicals and absolute values, at specified values of their variables.</p> <p><i>For example:</i> Evaluate <math>\pi r^2 h</math> when <math>r = 3</math> and <math>h = 0.5</math>, and then use an approximation of <math>\pi</math>, to obtain an approximate answer.</p>	<p><b>Student Edition:</b> 12-16, 21-29, 32-34, 35-39, 40-42, 43-48, 60-62, 63-68, 216-219, 223-227, 230-233, 236-239, 347-350</p> <p><i>Review and Self-Assessment</i> 69-71</p> <p><b>Teacher Edition:</b> AA 54, 350; DU 16; I 17, 32, 60; OSA 231; QQ 48, 68; RAL 16, 33; T 15</p>
<p>8.2.3.2</p> <p>Justify steps in generating equivalent expressions by identifying the properties used, including the properties of algebra. Properties include the associative, commutative and distributive laws, and the order of operations, including grouping symbols.</p>	<p><b>Student Edition:</b> 51-52, 53-55, 56-59, 60-62, 63-68, 91 #42-#45, 255 #42-#47, 480, 481, 482, 529 #28-#33</p> <p><i>Review and Self-Assessment</i> 69-71</p> <p><b>Teacher Edition:</b> AA 54, 62; DU 56, 481; I 56, 60; MB 58; QQ 68; T 57</p>

## STANDARDS

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**Represent real-world and mathematical situations using equations and inequalities involving linear expressions. Solve equations and inequalities symbolically and graphically. Interpret solutions in the original context.**

<p>8.2.4.1</p> <p>Use linear equations to represent situations involving a constant rate of change, including proportional and non-proportional relationships.</p> <p><i>For example:</i> For a cylinder with fixed radius of length 5, the surface area <math>A = 2\pi(5)h + 2\pi(5)^2 = 10\pi h + 50\pi</math>, is a linear function of the height <math>h</math>, but it is not proportional to the height.</p>	<p><b>Student Edition:</b> 212-215, 216-219, 377-379, 380-381, 382-388, 398-401, 464-465, 484-488, 510-513, 514-516, 517-518, 534-536</p> <p><b>Teacher Edition:</b> AA 215; DU 378, 535; MP 380; QQ 388; T 511; WU 513</p>
<p>8.2.4.2</p> <p>Solve multi-step equations in one variable. Solve for one variable in a multi-variable equation in terms of the other variables. Justify the steps by identifying the properties of equalities used.</p> <p><i>For example:</i> The equation <math>10x + 17 = 3x</math> can be changed to <math>7x + 17 = 0</math>, and then to <math>7x = -17</math> by adding/subtracting the same quantities to both sides. These changes do not change the solution of the equation.</p> <p><i>Another example:</i> Express the radius of a circle in terms of its circumference.</p>	<p><b>Student Edition:</b> 437-439, 449-452, 453-454, 455-459, 461, 462-463, 464-465, 469-473, 474-476, 477-480, 481-483, 484-488</p> <p><i>Review &amp; Self-Assessment</i> 489-491</p> <p><b>Teacher Edition:</b> AA 489; DU 463, 464; I 462; QQ 473, 488; RAL 439; SS 465, 480</p>
<p>8.2.4.3</p> <p>Express linear equations in slope-intercept, point-slope and standard forms, and convert between these forms. Given sufficient information, find an equation of a line.</p> <p><i>For example:</i> Determine an equation of the line through the points <math>(-1,6)</math> and <math>(2/3, -3/4)</math>.</p>	<p><b>Student Edition:</b> 394-396, 398-401, 402-409, 417-419, 420-422, 424-430, 487 #52</p> <p><i>Review &amp; Self-Assessment</i> 431-433, 490 #6</p> <p><b>Teacher Edition:</b> AA 424; DU 421; QC 429; QQ 430; SF 417; TT 401; WU 418</p>
<p>8.2.4.4</p> <p>Use linear inequalities to represent relationships in various contexts.</p> <p><i>For example:</i> A gas station charges \$0.10 less per gallon of gasoline if a customer also gets a car wash. Without the car wash, gas costs \$2.79 per gallon. The car wash is \$8.95. What are the possible amounts (in gallons) of gasoline that you can buy if you also get a car wash and can spend at most \$35?</p>	<p><b>Student Edition:</b> 143-145, 426 #13, 466-468, 469-473, 550 #20-#23</p> <p><i>Develop &amp; Understand</i> 419</p> <p><b>Teacher Edition:</b> AA 470; DU 144, 468; I 466; OSA 466; QQ 473; RAL 143, 468; T 466, 468; TD 467; WU 468</p>

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<p>8.2.4.5</p> <p>Solve linear inequalities using properties of inequalities. Graph the solutions on a number line.</p> <p><i>For example:</i> The inequality <math>-3x &lt; 6</math> is equivalent to <math>x &gt; -2</math>, which can be represented on the number line by shading in the interval to the right of <math>-2</math>.</p>	<p><b>Student Edition:</b> 143-145, 426 #13, 466-468, 469-473, 550 #20-#23 <i>Develop &amp; Understand</i> 419</p> <p><b>Teacher Edition:</b> AA 470; DU 144, 468; I 466; OSA 466; QQ 473; RAL 143, 468; T 466, 468; TD 467; WU 468</p>
<p>8.2.4.6</p> <p>Represent relationships in various contexts with equations and inequalities involving the absolute value of a linear expression. Solve such equations and inequalities and graph the solutions on a number line.</p> <p><i>For example:</i> A cylindrical machine part is manufactured with a radius of 2.1 cm, with a tolerance of <math>1/100</math> cm. The radius <math>r</math> satisfies the inequality <math> r - 2.1  \leq .01</math>.</p>	<p>Equations and inequalities involving absolute value can be included in the following lesson.</p> <p><b>Student Edition:</b> 466-468</p>
<p>8.2.4.7</p> <p>Represent relationships in various contexts using systems of linear equations. Solve systems of linear equations in two variables symbolically, graphically and numerically.</p> <p><i>For example:</i> Marty's cell phone company charges \$15 per month plus \$0.04 per minute for each call. Jeannine's company charges \$0.25 per minute. Use a system of equations to determine the advantages of each plan based on the number of minutes used.</p>	<p>See <i>Math Connects: Concepts, Skills, and Problem Solving, Course 3</i> © 2009.</p> <p><b>Student Edition:</b> 502-507 <i>Graphing Calculator Lab</i> 500-501 <i>Study Guide and Review</i> 521 <i>Practice Test</i> 523</p> <p><b>Teacher Edition:</b> A 507; AE 503-504; PAA 505; SQ 502</p>
<p>8.2.4.8</p> <p>Understand that a system of linear equations may have no solution, one solution, or an infinite number of solutions. Relate the number of solutions to pairs of lines that are intersecting, parallel or identical. Check whether a pair of numbers satisfies a system of two linear equations in two unknowns by substituting the numbers into both equations.</p>	<p>See <i>Math Connects: Concepts, Skills, and Problem Solving, Course 3</i> © 2009.</p> <p><b>Student Edition:</b> 502-507 <i>Graphing Calculator Lab</i> 500-501 <i>Study Guide and Review</i> 521 <i>Practice Test</i> 523</p> <p><b>Teacher Edition:</b> A 507; AE 503-504; PAA 505; SQ 502</p>

STANDARDS	PAGE REFERENCES
<p>8.2.4.9</p> <p>Use the relationship between square roots and squares of a number to solve problems.</p> <p><i>For example:</i> If <math>\pi x^2 = 5</math>, then <math> x  = \sqrt{\frac{5}{\pi}}</math>, or equivalently, <math>x = \sqrt{\frac{5}{\pi}}</math> or <math>x = -\sqrt{\frac{5}{\pi}}</math>. If <math>x</math> is understood as the radius of a circle in this example, then the negative solution should be discarded and <math>x = \sqrt{\frac{5}{\pi}}</math>.</p>	<p><b>Student Edition:</b> 331-335, 336-338, 339-342, 343-346, 346-350, 351-354, 355-360, 471 #34-#36</p> <p><i>Review &amp; Self-Assessment</i> 363 #13-#14</p> <p><b>Teacher Edition:</b> AA 350; DU 347; E 356, 363; QQ 360; T 347, 350; TA 353; TD 331; WHYL 354</p>
<p>Geometry &amp; Measurement</p>	
<p><b>Solve problems involving right triangles using the Pythagorean Theorem and its converse.</b></p>	
<p>8.3.1.1</p> <p>Use the Pythagorean Theorem to solve problems involving right triangles.</p> <p><i>For example:</i> Determine the perimeter of a right triangle, given the lengths of two of its sides.</p> <p><i>Another example:</i> Show that a triangle with side lengths 4, 5 and 6 is not a right triangle.</p>	<p><b>Student Edition:</b> 343-346, 347-350, 351-354, 355-360</p> <p><i>Review &amp; Self-Assessment</i> 360-365</p> <p><b>Teacher Edition:</b> AA 350; DU 344, 347; E 357, 360; O 343A; QQ 360; RAL 349; T 346, 347, 350</p>
<p>8.3.1.2</p> <p>Determine the distance between two points on a horizontal or vertical line in a coordinate system. Use the Pythagorean Theorem to find the distance between any two points in a coordinate system.</p>	<p><b>Student Edition:</b> 351-354</p> <p><b>Teacher Edition:</b> O 343A; Q 352, 353; TA 353; TO 351; WHYL 354</p>
<p>8.3.1.3</p> <p>Informally justify the Pythagorean Theorem by using measurements, diagrams and computer software.</p>	<p><b>Student Edition:</b> 343-346, 347-350, 355-360</p> <p><i>Review &amp; Self-Assessment</i> 363 #14</p> <p><b>Teacher Edition:</b> AP 343A; DU 344, 347; E 355; I 343; MB 345; O 343A; T 34T 346; TO 351; WU 345</p>
<p><b>Solve problems involving parallel and perpendicular lines on a coordinate system.</b></p>	
<p>8.3.2.1</p> <p>Understand and apply the relationships between the slopes of parallel lines and between the slopes of perpendicular lines. Dynamic graphing software may be used to examine the relationships between lines and their equations.</p>	<p>See <i>Math Connects: Concepts, Skills, and Problem Solving, Course 3</i> © 2009.</p> <p><b>Student Edition:</b> 502-507</p> <p><i>Study Tip</i> 504</p> <p><b>Teacher Edition:</b> A 507; PAA 505</p>

STANDARDS	PAGE REFERENCES
<p>8.3.2.2</p> <p>Analyze polygons on a coordinate system by determining the slopes of their sides.</p> <p><i>For example:</i> Given the coordinates of four points, determine whether the corresponding quadrilateral is a parallelogram.</p>	<p>See <i>Math Connects: Concepts, Skills, and Problem Solving, Course 3</i> © 2009.</p> <p><b>Student Edition:</b>  <i>Geometry Lab</i> 493</p>
<p>8.3.2.3</p> <p>Given a line on a coordinate system and the coordinates of a point not on the line, find lines through that point that are parallel and perpendicular to the given line, symbolically and graphically.</p>	<p>See <i>Math Connects: Concepts, Skills, and Problem Solving, Course 3</i> © 2009.</p> <p><b>Student Edition:</b>            502-507 (concept can be introduced)</p>
<p>Data Analysis &amp; Probability</p>	
<p><b>Interpret data using scatterplots and approximate lines of best fit. Use lines of best fit to draw conclusions about data.</b></p>	
<p>8.4.1.1</p> <p>Collect, display and interpret data using scatterplots. Use the shape of the scatterplot to informally estimate a line of best fit and determine an equation for the line. Use appropriate titles, labels and units. Know how to use graphing technology to display scatterplots and corresponding lines of best fit.</p>	<p>See <i>Math Connects: Concepts, Skills, and Problem Solving, Course 3</i> © 2009.</p> <p><b>Student Edition:</b>            510-515  <i>Problem-Solving Investigation</i> 508-509  <i>Graphing Calculator Lab</i> 516-517  <i>Study Guide and Review</i> 522  <i>Practice Test</i> 523  <i>Test Practice</i> 525 #7, #9</p> <p><b>Teacher Edition:</b>            510b</p> <p>A 515; AE 511-512; DI 511; FMC 511; SQ 510</p>
<p>8.4.1.2</p> <p>Use a line of best fit to make statements about approximate rate of change and to make predictions about values not in the original data set.</p> <p><i>For example:</i> Given a scatterplot relating student heights to shoe sizes, predict the shoe size of a 5'4" student, even if the data does not contain information for a student of that height.</p>	<p>See <i>Math Connects: Concepts, Skills, and Problem Solving, Course 3</i> © 2009.</p> <p><b>Student Edition:</b>            510-515  <i>Graphing Calculator Lab</i> 516-517  <i>Problem-Solving Investigation</i> 508-509  <i>Study Guide and Review</i> 522  <i>Practice Test</i> 523  <i>Test Practice</i> 525 #7, #9</p> <p><b>Teacher Edition:</b>            510b</p> <p>A 515; AE 511-512; DI 511; FMC 511; SQ 510</p>

STANDARDS	PAGE REFERENCES
<p>8.4.1.3</p> <p>Assess the reasonableness of predictions using scatterplots by interpreting them in the original context.</p> <p><i>For example:</i> A set of data may show that the number of women in the U.S. Senate is growing at a certain rate each election cycle. Is it reasonable to use this trend to predict the year in which the Senate will eventually include 1000 female Senators?</p>	<p>See <i>Math Connects: Concepts, Skills, and Problem Solving, Course 3</i> © 2009.</p> <p><b>Student Edition:</b> 510-515 <i>Problem-Solving Investigation</i> 508-509 <i>Graphing Calculator Lab</i> 516-517 <i>Study Guide and Review</i> 522 <i>Practice Test</i> 523 <i>Test Practice</i> 525 #7</p> <p><b>Teacher Edition:</b> 510b A 515; AE 511-512; DI 511; FMC 511; SQ 510</p>

### Codes Used for Teacher Edition pages

*Impact Mathematics, Course 2 © 2009*

AA	Additional Answer
CH	Calculate the Height
DU	Develop & Understand
E	Exercise
HA	Home Activities
I	Introduce
MB	Mathematical Background
ML	Math Link
MP	Materials and Preparation
OL	On Level
OSA	On the Spot Assessment
PR	Proportional Relationships
QQ	Quick Quiz
RAL	Reaching All Learners
RN	Rational Numbers
SS	Share & Summarize
T	Troubleshooting
TD	Think & Discuss
TT	Teacher Tips
WDYL	What Did You Learn
WU	Wrap Up

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A	Assess
AE	Additional Examples
DI	Differentiated Instruction
FMC	Focus on Mathematical Concept
PAA	Pre-AP Activity
SQ	Scaffolding Questions