



Math Connects

Course 2
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STANDARDS	PAGE REFERENCES
Number & Operation	
Read, write, represent and compare positive rational numbers expressed as fractions, decimals, percents and ratios; write positive integers as products of factors; use these representations in real-world and mathematical situations.	
<p>6.1.1.1 Locate positive rational numbers on a number line and plot pairs of positive rational numbers on a coordinate grid.</p>	<p>Student Edition: 77-80, 81-85, 99, 117, 120, 383-384, 385-389, 391, 393-395, 396-399, 405-410, 411, 412-415, 419-420 <i>Key Concept</i> 78, 81, 387, 406, 407, 412 <i>Mid-Chapter Check</i> 99 <i>More About</i> 383-384, 395 <i>Reading Math</i> 82 <i>Study Tip</i> 78, 386 <i>Test Practice</i> 80, 84 Teacher Edition: AE 78, 82-83, 386-387, 406-407; MA 383-384, 395</p>

STANDARDS	PAGE REFERENCES
<p>6.1.1.2</p> <p>Compare positive rational numbers represented in various forms. Use the symbols < and >.</p> <p><i>For example:</i> $\frac{1}{2} > 0.36$.</p>	<p>Student Edition: 133-138, 143, 151 #59-#61, 157, 165 #56-#58, 191, 194 <i>Key Concept</i> 135 <i>Mid-Chapter Check</i> 157 <i>Quick Review</i> 134 <i>Study Tip</i> 135 <i>Test Practice</i> 138</p> <p>Teacher Edition: AE 134-135; ATS 135; F 133; FMC 134, 135; FU 137; NTM 138; QR 134; SAR 137; SQ 133; TNT 134; TWT 135, 137; WO 136</p>
<p>6.1.1.3</p> <p>Understand that percent represents parts out of 100 and ratios to 100.</p> <p><i>For example:</i> 75% is equivalent to the ratio 75 to 100, which is equivalent to the ratio 3 to 4.</p>	<p>Student Edition: 318-319, 320-324, 325-330, 331, 332-336, 337-341 <i>Key Concept</i> 332, 339 <i>Quick Review</i> 321, 325 <i>Study Tip</i> 321, 326, 333, 337, 338</p> <p>Teacher Edition: AE 321, 326-327, 333-334, 338-339; ATS 322; F 318, 320, 325, 331, 332, 337; SQ 320, 325, 332, 337</p>
<p>6.1.1.4</p> <p>Determine equivalences among fractions, decimals and percents; select among these representations to solve problems.</p> <p><i>For example:</i> Since $\frac{1}{10}$ is equivalent to 10%, if a woman making \$25 an hour gets a 10% raise, she will make an additional \$2.50 an hour, because \$2.50 is $\frac{1}{10}$ of \$25.</p>	<p>Student Edition: 128-132, 133-138, 317, 346-350, 351-354, 355-358, 359-362, 363, 368-369, 370, 468-470 <i>Key Concept</i> 135, 346 <i>Quick Review</i> 134 <i>Study Tip</i> 135, 347, 349, 352, 356, 360 <i>Test Practice</i> 471</p> <p>Teacher Edition: AE 129-130, 134-135, 347, 352, 355-356, 359-360, 469</p>
<p>6.1.1.5</p> <p>Factor whole numbers; express a whole number as a product of prime factors with exponents.</p> <p><i>For example:</i> $24 = 2^3 \times 3$.</p>	<p>Student Edition: 25-28</p> <p>Teacher Edition: F 25; FMC 26</p>

STANDARDS	PAGE REFERENCES
<p>6.1.1.6</p> <p>Determine greatest common factors and least common multiples. Use common factors and common multiples to do arithmetic with fractions and find equivalent fractions.</p> <p><i>For example:</i> Factor the numerator and denominator of a fraction to determine an equivalent fraction.</p>	<p>Student Edition:</p> <p>133-138, 144-145, 146-151, 152-156, 157, 160-165</p> <p><i>Key Concept</i> 135, 146, 160</p> <p><i>Mid-Chapter Check</i> 157</p> <p><i>Quick Review</i> 134, 154, 161</p> <p><i>Study Tip</i> 135, 147, 153, 161, 162</p> <p>Teacher Edition:</p> <p>AE 134-135, 147-148, 153-154, 161-162; DI 148; F 144, 146, 152, 160; FMC 135, 147, 153, 161; SQ 146, 152, 160; TNT 152, 155, 162</p>
<p>6.1.1.7</p> <p>Convert between equivalent representations of positive rational numbers.</p> <p><i>For example:</i> Express $\frac{10}{7}$ as $\frac{7+3}{7} = \frac{7}{7} + \frac{3}{7} = 1\frac{3}{7}$.</p>	<p>Student Edition:</p> <p>130, 152-156, 157, 160-165, 168-173, 192-193, 194</p> <p><i>Key Concept</i> 160, 168</p> <p><i>Quick Review</i> 161, 169</p> <p><i>Study Tip</i> 153, 161, 162, 169</p> <p>Teacher Edition:</p> <p>AE 153-154, 161-162, 169-170; ATS 130, 170; F 152, 160, 168; QR 161, 169; SAR 156; SQ 152, 160, 168; SAR 156; TNT 152, 155, 162</p>
<p>Understand the concept of ratio and its relationship to fractions and to the multiplication and division of whole numbers. Use ratios to solve real-world and mathematical problems.</p>	
<p>6.1.2.1</p> <p>Identify and use ratios to compare quantities; understand that comparing quantities using ratios is not the same as comparing quantities using subtraction.</p> <p><i>For example:</i> In a classroom with 15 boys and 10 girls, compare the numbers by subtracting (there are 5 more boys than girls) or by dividing (there are 1.5 times as many boys as girls). The comparison using division may be expressed as a ratio of boys to girls (3 to 2 or 3:2 or 1.5 to 1).</p>	<p>Student Edition:</p> <p>284-290, 291, 292, 293-298, 303, 308-309, 429-434, 626-630</p> <p><i>Key Concept</i> 294, 429</p> <p><i>Mid-Chapter Check</i> 292</p> <p><i>More About</i> 298</p> <p><i>Study Tip</i> 285, 286, 294, 431</p> <p>Teacher Edition:</p> <p>AE 285-286, 294-295, 430-431, 627-628; F 284, 291, 429; FMC 285, 627; MA 298; QR 628; SAR 291; SQ 284, 293, 429; TNT 284, 295</p>

STANDARDS	PAGE REFERENCES
<p>6.1.2.2</p> <p>Apply the relationship between ratios, equivalent fractions and percents to solve problems in various contexts, including those involving mixtures and concentrations.</p> <p><i>For example:</i> If 5 cups of trail mix contains 2 cups of raisins, the ratio of raisins to trail mix is 2 to 5. This ratio corresponds to the fact that the raisins are $\frac{2}{5}$ of the total, or 40% of the total. And if one trail mix consists of 2 parts peanuts to 3 parts raisins, and another consists of 4 parts peanuts to 8 parts raisins, then the first mixture has a higher concentration of peanuts.</p>	<p>Student Edition:</p> <p>133-138, 317, 318-319, 345, 346-350, 351-354, 355-358, 359-362, 363, 368-369, 370, 626-630, 639-642</p> <p><i>Key Concept</i> 135, 346</p> <p><i>Quick Review</i> 134</p> <p><i>Study Tip</i> 135, 347, 349, 352, 356, 360, 640</p> <p>Teacher Edition:</p> <p>AE 134-135, 347, 352, 355-356, 359-360, 627-628, 640; ATS 135, 628; F 133, 351, 639; FMC 135, 627, 640; SQ 133, 351, 639; TNT 134</p>
<p>6.1.2.3</p> <p>Determine the rate for ratios of quantities with different units.</p> <p><i>For example:</i> 60 miles in 3 hours is equivalent to 20 miles in one hour (20 mph).</p>	<p>Student Edition:</p> <p>265, 266-271, 272-275, 276-280, 281, 307, 626-630, 639-642</p> <p><i>Key Concept</i> 276</p> <p><i>Quick Review</i> 267</p> <p><i>Study Tip</i> 267, 278, 640</p> <p>Teacher Edition:</p> <p>AE 267-268, 273, 640; ATS 628; DI 275; EA 642; F 272, 639; FMC 268, 272, 640; SAR 281; SQ 266, 272, 639; TNT 267</p>
<p>6.1.2.4</p> <p>Use reasoning about multiplication and division to solve ratio and rate problems.</p> <p><i>For example:</i> If 5 items cost \$3.75, and all items are the same price, then 1 item costs 75 cents, so 12 items cost \$9.00.</p>	<p>Student Edition:</p> <p>265, 266-271, 276-280, 281, 307, 468-471, 639-642</p> <p><i>Key Concept</i> 276</p> <p><i>Quick Review</i> 267</p> <p><i>Study Tip</i> 267, 278, 640</p> <p>Teacher Edition:</p> <p>AE 267-268, 277-278, 469, 640; ATS 277, 469; EA 642; F 276, 639; FMC 277, 468, 640; SAR 281; SQ 639</p>

STANDARDS	PAGE REFERENCES
Multiply and divide decimals, fractions and mixed numbers; solve real-world and mathematical problems using arithmetic with positive rational numbers.	
<p>6.1.3.1</p> <p>Multiply and divide decimals and fractions, using efficient and generalizable procedures, including standard algorithms.</p>	<p>Student Edition: 158-159, 160-165, 168-173, 192-193, 194, 627-628 <i>Explore</i> 168 <i>Key Concept</i> 160, 168 <i>Quick Review</i> 161, 628 <i>Study Tip</i> 161, 162, 169</p> <p>Teacher Edition: AE 161-162, 169-170, 469; ATS 170, 469; DI 158, 168, 172, 469; F 158, 160, 168; FMC 161, 468; QR 161, 169, 627, 628; SAR 173; SQ 160, 168, 468; TNT 160, 162</p>
<p>6.1.3.2</p> <p>Use the meanings of fractions, multiplication, division and the inverse relationship between multiplication and division to make sense of procedures for multiplying and dividing fractions.</p> <p><i>For example:</i> Just as $\frac{12}{4}=3$ means $12=3\times 4$, $\frac{2}{3}\div\frac{4}{5}=\frac{5}{6}$ means $\frac{5}{6}\times\frac{4}{5}=\frac{2}{3}$.</p>	<p>Student Edition: 158-159, 160-165, 168-173, 192-193, 194, 627-628 <i>Explore</i> 168 <i>Key Concept</i> 160, 168 <i>Quick Review</i> 161 <i>Study Tip</i> 161, 162, 169</p> <p>Teacher Edition: AE 161-162, 169-170; ATS 170; DI 158, 168, 172; F 158, 160, 168; FMC 161; QR 161, 169, 627, 628; SAR 173; SQ 160, 168; TNT 160, 162</p>
<p>6.1.3.3</p> <p>Calculate the percent of a number and determine what percent one number is of another number to solve problems in various contexts.</p> <p><i>For example:</i> If John has \$45 and spends \$15, what percent of his money did he keep?</p>	<p>Student Edition: 318-319, 320-324, 325-330, 332-336, 337-341 <i>Key Concept</i> 332, 339 <i>Quick Review</i> 321, 325 <i>Study Tip</i> 321, 326, 333, 337, 338</p> <p>Teacher Edition: AE 321, 326-327, 333-334, 338-339, 469; DI 323, 338; F 318, 320, 325, 337; FMC 321, 326; SQ 320, 325, 333, 337, 468; TNT 326</p>
<p>6.1.3.4</p> <p>Solve real-world and mathematical problems requiring arithmetic with decimals, fractions and mixed numbers.</p>	<p>Student Edition: 128-132, 139-143, 144-145, 146-151, 152-156, 157, 158-159, 160-165, 168-173, 174-175, 626-630 <i>Key Concept</i> 139, 146, 160, 168 <i>Mid-Chapter Check</i> 157 <i>Study Tip</i> 147, 153, 161, 162, 169</p> <p>Teacher Edition: AE 129-130, 140-141, 147-148, 153-154, 161-162, 469, 627-628; ATS 469; DI 168; F 128; SQ 128, 152, 468, 626; TNT 129, 153; WO 629</p>

STANDARDS	PAGE REFERENCES
<p>6.1.3.5</p> <p>Estimate solutions to problems with whole numbers, fractions and decimals and use the estimations to assess the reasonableness of computations and of results in the context of the problem.</p> <p><i>For example:</i> The sum $\frac{1}{3} + 0.25$ can be estimated to be between $\frac{1}{2}$ and 1, and this estimate can be used as a check on the result of a more detailed calculation.</p>	<p>Student Edition: 128-132, 146-151, 152-156, 281, 321, 325-330, 445-446, 516, 566, 629</p> <p><i>Key Concept</i> 146 <i>Quick Review</i> 325 <i>Study Tip</i> 147, 153, 321, 326, 445, 516</p> <p>Teacher Edition: AE 129-130, 147-148, 326-327; F 146, 152, 325; FMC 129, 140, 147, 326; QR 325; SQ 128, 146, 152, 325; TNT 129, 155, 326, 566</p>
<p>Algebra</p>	
<p>Recognize and represent relationships between varying quantities; translate from one representation to another; use patterns, tables, graphs and rules to solve real-world and mathematical problems.</p>	
<p>6.2.1.1</p> <p>Understand that a variable can be used to represent a quantity that can change, often in relationship to another changing quantity. Use variables in various contexts.</p> <p><i>For example:</i> If a student earns \$7 an hour in a job, the amount of money earned can be represented by a variable and is related to the number of hours worked, which also can be represented by a variable.</p>	<p>Student Edition: 33-37, 51, 65, 204-205, 206-207, 208-213, 214, 215-219, 220, 221-226, 228-229, 230-234, 235, 236-239, 241, 242-243, 244-248, 249-253, 255-257, 258</p> <p><i>Explore</i> 33 <i>Key Concept</i> 208, 210, 215, 217, 221, 231, 244, 249, 250 <i>Mid-Chapter Check</i> 51 <i>Study Tip</i> 35, 209, 210, 223, 231, 245, 251 <i>Test Practice</i> 37</p> <p>Teacher Edition: AE 34, 209-210, 232, 245-246; ATS 35; DI 35; F 33, 204, 206; FMC 34; FU 37; SQ 33, 208; WO 36</p>
<p>6.2.1.2</p> <p>Represent the relationship between two varying quantities with function rules, graphs and tables; translate between any two of these representations.</p> <p><i>For example:</i> Describe the terms in the sequence of perfect squares $t = 1, 4, 9, 16, \dots$ by using the rule $t = n^2$ for $n = 1, 2, 3, 4, \dots$</p>	<p>Student Edition: 378-384, 385-389, 390, 391, 392-395, 396-399, 400, 401, 405-410, 411, 412-415, 417, 419-421, 422</p> <p><i>Key Concept</i> 387, 396, 406, 407, 412 <i>Mid-Chapter Check</i> 401 <i>More About</i> 383-384, 395 <i>Study Tip</i> 379, 386, 407</p> <p>Teacher Edition: AE 379, 386-387, 392-393, 397, 406-407, 413; MA 383-384, 395</p>

STANDARDS	PAGE REFERENCES
<p>Use properties of arithmetic to generate equivalent numerical expressions and evaluate expressions involving positive rational numbers</p>	
<p>6.2.2.1</p> <p>Apply the associative, commutative and distributive properties and order of operations to generate equivalent expressions and to solve problems involving positive rational numbers.</p> <p><i>For example:</i> $\frac{32}{15} \times \frac{5}{6} = \frac{32 \times 5}{15 \times 6} = \frac{2 \times 16 \times 5}{3 \times 5 \times 3 \times 2} = \frac{16}{9} \times \frac{2}{2} \times \frac{5}{5} = \frac{16}{9}$.</p> <p><i>Another example:</i> Use the distributive law to write:</p> $\frac{1}{2} + \frac{1}{3} \left(\frac{9}{2} - \frac{15}{8} \right) = \frac{1}{2} + \frac{1}{3} \times \frac{9}{2} - \frac{1}{3} \times \frac{15}{8} = \frac{1}{2} + \frac{3}{2} - \frac{5}{8} = 2 - \frac{5}{8} = 1\frac{3}{8}$	<p>Student Edition: 29-32, 38-41, 51, 65 <i>Key Concept</i> 29, 38, 39 <i>Mid-Chapter Check</i> 51 <i>Study Tip</i> 39 <i>Test Practice</i> 32, 41</p> <p>Teacher Edition: AE 30, 39; ATS 30, 39; F 29, 38; FMC 30, 38; SAR 41; SQ 29, 38; TNT 31; TP 32; WO 31</p>
<p>Understand and interpret equations and inequalities involving variables and positive rational numbers. Use equations and inequalities to represent real-world and mathematical problems; use the idea of maintaining equality to solve equations. Interpret solutions in the original context.</p>	
<p>6.2.3.1</p> <p>Represent real-world or mathematical situations using equations and inequalities involving variables and positive rational numbers.</p> <p><i>For example:</i> The number of miles m in a k kilometer race is represented by the equation $m = 0.62 k$.</p>	<p>Student Edition: 204-205, 206-207, 208-213, 214, 215-219, 220, 221-226, 228-229, 230-234, 235, 236-239, 241, 242-243, 244-248, 249-253, 255-257, 258</p> <p><i>Key Concept</i> 208, 210, 215, 217, 221, 231, 244, 249, 250</p> <p><i>Study Tip</i> 209, 210, 223, 231, 245, 251</p> <p>Teacher Edition: AE 209-210, 232, 245-246; F 204, 206; SQ 208</p>
<p>6.2.3.2</p> <p>Solve equations involving positive rational numbers using number sense, properties of arithmetic and the idea of maintaining equality on both sides of the equation. Interpret a solution in the original context and assess the reasonableness of results.</p> <p><i>For example:</i> A cellular phone company charges \$0.12 per minute. If the bill was \$11.40 in April, how many minutes were used?</p>	<p>Student Edition: 128-132, 146-151, 152-156, 321, 325-330, 445, 516, 566</p> <p><i>Quick Review</i> 325</p> <p><i>Study Tip</i> 147, 153, 321, 326, 445, 516</p> <p>Teacher Edition: AE 129, 153-154, 326-327; ATS 327; DI 131; F 128, 152, 325; FMC 129, 326; SQ 128, 152, 325; TNT 129, 155, 326, 566; WO 328</p>

STANDARDS	PAGE REFERENCES
Geometry & Measurement	
Calculate perimeter, area, surface area and volume of two- and three-dimensional figures to solve real-world and mathematical problems.	
<p>6.3.1.1</p> <p>Calculate the surface area and volume of prisms and use appropriate units, such as cm^2 and cm^3. Justify the formulas used. Justification may involve decomposition, nets or other models.</p> <p><i>For example:</i> The surface area of a triangular prism can be derived by decomposing the surface into two triangles and three rectangles.</p>	<p>Student Edition: 557, 558-563, 574, 579, 580-581, 582-587, 591, 592-593, 604-605, 612, 614, 616, 650-651</p> <p><i>Explore</i> 582 <i>Key Concept</i> 558, 582 <i>Mid-Chapter Check</i> 579 <i>Study Tip</i> 559, 560, 583</p> <p>Teacher Edition: AE 559-560, 583-584; ATS 560, 584; DI 593; F 557, 558, 582, 592; FMC 559, 583; SQ 558, 582; TNT 559, 560, 582; WO 561</p>
<p>6.3.1.2</p> <p>Calculate the area of quadrilaterals. Quadrilaterals include squares, rectangles, rhombuses, parallelograms, trapezoids and kites. When formulas are used, be able to explain why they are valid.</p> <p><i>For example:</i> The area of a kite is one-half the product of the lengths of the diagonals, and this can be justified by decomposing the kite into two triangles.</p>	<p>Student Edition: 569-570, 571-574, 579, 582-587, 591, 592-593, 594-597, 604-605, 612, 614, 616, 643-648, 650-651</p> <p><i>Key Concept</i> 571, 582 <i>Mid-Chapter Check</i> 579 <i>Study Tip</i> 583</p> <p>Teacher Edition: AE 572, 583-584, 595; ATS 573; DI 572, 593; F 569, 580, 582, 592; FMC 571, 583; SQ 571, 582, 594; TNT 569, 582, 596; WO 573</p>
<p>6.3.1.3</p> <p>Estimate the perimeter and area of irregular figures on a grid when they cannot be decomposed into common figures and use correct units, such as cm and cm^2.</p>	<p>Student Edition: 650-651</p>
Understand and use relationships between angles in geometric figures.	
<p>6.3.2.1</p> <p>Solve problems using the relationships between the angles formed by intersecting lines.</p> <p><i>For example:</i> If two streets cross, forming four corners such that one of the corners forms an angle of 120°, determine the measures of the remaining three angles.</p> <p><i>Another example:</i> Recognize that pairs of interior and exterior angles in polygons have measures that sum to 180°.</p>	<p>Student Edition: 675-679, 685 #37, 693-698</p> <p><i>Key Concept</i> 675, 695 <i>More About</i> 679 <i>Study Tip</i> 676, 678</p> <p>Teacher Edition: DI 676; FMC 675; MA 679; NTM 679; WO 685</p>

STANDARDS	PAGE REFERENCES
<p>6.3.2.2</p> <p>Determine missing angle measures in a triangle using the fact that the sum of the interior angles of a triangle is 180°. Use models of triangles to illustrate this fact.</p> <p><i>For example:</i> Cut a triangle out of paper, tear off the corners and rearrange these corners to form a straight line.</p> <p><i>Another example:</i> Recognize that the measures of the two acute angles in a right triangle sum to 90°.</p>	<p>Student Edition: 680, 681-686, 692 <i>Explore</i> 680, 681 <i>Key Concept</i> 681</p> <p>Teacher Edition: AE 682-683; F 680; FCA 680; FMC 682; SQ 681; TNT 680</p>
<p>6.3.2.3</p> <p>Develop and use formulas for the sums of the interior angles of polygons by decomposing them into triangles.</p>	<p>Student Edition: 687, 694-698, 705 #21, 708 #15-#18 <i>Explore</i> 687 <i>Key Concept</i> 687, 695 <i>Mid-Chapter Check</i> 705 <i>Quick Review</i> 697 <i>Study Tip</i> 694</p> <p>Teacher Edition: AE 694-695; DI 695; WO 696</p>
<p>Choose appropriate units of measurement and use ratios to convert within measurement systems to solve real-world and mathematical problems.</p>	
<p>6.3.3.1</p> <p>Solve problems in various contexts involving conversion of weights, capacities, geometric measurements and times within measurement systems using appropriate units.</p>	<p>Student Edition: 626-630, 631-634, 643-648, 649, 652-653 <i>Explore</i> 631 <i>Key Concept</i> 626, 644, 645 <i>Mid-Chapter Check</i> 649 <i>More About</i> 634 <i>Study Tip</i> 627, 632, 644, 645</p> <p>Teacher Edition: AE 627-628, 632, 644-645; ATS 633-644; F 626, 631, 643, 652; FMC 627, 632, 643; MA 634; P 653; SAR 648; SQ 626, 631, 643; TNT 632, 644, 645; TWT 652</p>
<p>6.3.3.2</p> <p>Estimate weights, capacities and geometric measurements using benchmarks in measurement systems with appropriate units.</p> <p><i>For example:</i> Estimate the height of a house by comparing to a 6-foot man standing nearby.</p>	<p>Student Edition: 624-625, 626-630 <i>Study Tip</i> 627</p> <p>Teacher Edition: F 624, 626; FCA 625; T 624; WO 629</p>

STANDARDS	PAGE REFERENCES
Data Analysis & Probability	
Use probabilities to solve real-world and mathematical problems; represent probabilities using fractions, decimals and percents.	
<p>6.4.1.1</p> <p>Determine the sample space (set of possible outcomes) for a given experiment and determine which members of the sample space are related to certain events. Sample space may be determined by the use of tree diagrams, tables or pictorial representations.</p> <p><i>For example:</i> A 6×6 table with entries such as (1,1), (1,2), (1,3), ..., (6,6) can be used to represent the sample space for the experiment of simultaneously rolling two number cubes.</p>	<p>Student Edition: 435-439, 440-443, 444-447, 448, 458-462, 464-465, 472-476, 478, 481, 482 <i>Concept Summary</i> 472, 473 <i>Explore</i> 435 <i>Key Concept</i> 440 <i>Mid-Chapter Check</i> 448 <i>More About</i> 439, 447 <i>Problem-Solving Investigation</i> 464-465 <i>Study Tip</i> 436, 441, 445, 459' <i>Test Practice</i> 443</p> <p>Teacher Edition: AE 436, 441, 445, 459-460, 473-474; ATS 445; F 435, 440, 444; FMC 440, 444, 459, 473; MA 439, 447; SQ 435, 444, 458, 472</p>
<p>6.4.1.2</p> <p>Determine the probability of an event using the ratio between the size of the event and the size of the sample space; represent probabilities as percents, fractions and decimals between 0 and 1 inclusive. Understand that probabilities measure likelihood.</p> <p><i>For example:</i> Each outcome for a balanced number cube has probability $\frac{1}{6}$, and the probability of rolling an even number is $\frac{1}{2}$.</p>	<p>Student Edition: 429-434, 436-439, 441-443, 445-447, 448, 450-455, 456-457, 458-462, 463, 464-465, 466-467, 478-481, 482, 483 <i>Key Concept</i> 429, 450, 451 <i>Mid-Chapter Check</i> 448 <i>More About</i> 434, 439, 447, 455 <i>Problem-Solving Investigation</i> 464-465 <i>Study Tip</i> 431, 441, 445, 452, 459 <i>Test Practice</i> 434, 439, 443</p> <p>Teacher Edition: AE 430-431, 441, 445, 451-452, 459-460, 483; MA 434, 439, 447, 455; SAR 446, 454</p>
<p>6.4.1.3</p> <p>Perform experiments for situations in which the probabilities are known, compare the resulting relative frequencies with the known probabilities; know that there may be differences.</p> <p><i>For example:</i> Heads and tails are equally likely when flipping a fair coin, but if several different students flipped fair coins 10 times, it is likely that they will find a variety of relative frequencies of heads and tails.</p>	<p>Student Edition: 458-462, 463, 464-465, 466-467, 468-471, 478-481, 482, 817-818 <i>Explore</i> 458 <i>Problem-Solving Investigation</i> 464-465 <i>Quick Review</i> 460 <i>Study Tip</i> 459</p> <p>Teacher Edition: AE 459-460, 469; ATS 460, 469; DI 469, 470, 471; FMC 459, 468; SQ 458, 468; T 463; TNT 458; WCG 466</p>

STANDARDS	PAGE REFERENCES
<p>6.4.1.4</p> <p>Calculate experimental probabilities from experiments; represent them as percents, fractions and decimals between 0 and 1 inclusive. Use experimental probabilities to make predictions when actual probabilities are unknown.</p> <p><i>For example:</i> Repeatedly draw colored chips with replacement from a bag with an unknown mixture of chips, record relative frequencies, and use the results to make predictions about the contents of the bag.</p>	<p>Student Edition:</p> <p>440-443, 456-457, 458-462, 463, 464-465, 466-467, 468-471, 478-481, 482, 817-818</p> <p><i>Explore</i> 458</p> <p><i>Problem-Solving Investigation</i> 464-465</p> <p><i>Quick Review</i> 460</p> <p><i>Study Tip</i> 441, 459</p> <p>Teacher Edition:</p> <p>AE 441, 459-460; ATS 460, 469; DI 443, 469, 470, 471; FMC 459, 468; SQ 458, 468; T 463, TNT 458; WCG 466</p>