



Mathematics

Applications and Concepts

Course 3

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STANDARDS	PAGE REFERENCES
Grade 7	
Number Sense and Operations Strand <i>Students engage in problem solving, communicating, reasoning, connecting, and representing as they:</i>	
<p>7.N.1 Compare, order, estimate, and translate among integers, fractions and mixed numbers (i.e., rational numbers), decimals, and percents. <i>This standard is intentionally the same as standard 8.N.1.</i></p>	<p>Student Edition: 62-66, 67-70, 75 #37-#40, 86 #7-#10, 109 #21-#25, 207 (e.g. #3), 210-214 <i>The Game Zone</i> 33 Teacher Wraparound Edition: A 70; DI 68, 211; ICE 211</p>
<p>7.N.2 Use ratios and proportions in the solution of problems involving unit rates, scale drawings, and reading of maps.</p>	<p>Student Edition: 156-159, 170-173, 184-187, 188-191, 200, 202 #6, 203 #14, 229 (e.g. #7) <i>Hands-On Lab</i> 183 Teacher Wraparound Edition: A 159, 173; DI 157, 185, 229; ICE 171, 185</p>
<p>7.N.3 Represent numbers in scientific notation (positive powers of ten only) and use that notation in problem situations.</p>	<p>Student Edition: 104-107, 112 #9-#10, 119 #51, 122 #40, 649 #18-#20 Teacher Wraparound Edition: A 107; ICE 105</p>
<p>7.N.4 Demonstrate an understanding of absolute value, e.g., $-3 = 3 = 3$. <i>This standard is intentionally the same as standard 8.N.6.</i></p>	<p>Student Edition: 19-21, 25 (e.g. #5), 27 #47, 31 #51-#52, 32 #9-#12, 38 #48, 55 #23-#24 59 #14 Teacher Wraparound Edition: A 21; DI 18; TNT 19</p>

STANDARDS	PAGE REFERENCES
<p>7.N.5 Apply the rules of positive integer exponents to the solution of problems. Extend the Order of Operations to include positive integer exponents.</p>	<p>Student Edition: 11, 14 #9, 98-101, 107 #44, 113 #17, #18</p> <p>Teacher Wraparound Edition: A 101</p>
<p>7.N.6 Use the inverse relationships of addition and subtraction, and of multiplication and division, to simplify computations and solve problems, e.g., multiplying by $\frac{1}{2}$ or 0.5 is the same as dividing by 2.</p>	<p>Student Edition: 25-26, 28-29, 35 (e.g. #4), 50 (e.g. #1), 59 #15, 76-77</p> <p><i>Key Concept</i> 46 <i>Study Skill</i> 81</p> <p>Teacher Wraparound Edition: A 31, 80; B 28, 50; ICE 77; NS 79</p>
<p>7.N.7 Estimate and compute with fractions (including simplification of fractions), integers, decimals, and percents (including those greater than 100 and less than 1). <i>This standard is intentionally the same as standard 8.N.10.</i></p>	<p>Student Edition: 23-27, 28-31, 32 #13-#18, 34-38, 55-56, 58, 71-75, 76-80, 82-85, 88-91, 228-231, 600-601, 611</p> <p>Teacher Wraparound Edition: A 31, 75, 80; B 76; DI 24, 29, 229; ICE 229</p>
<p>7.N.8 Determine when an estimate rather than an exact answer is appropriate and apply in problem situations. <i>This standard is intentionally the same as standard 8.N.11.</i></p>	<p>Student Edition: 9 #7-#12, 15 #41-#42, 27 #53-#54, 64 (e.g. #3), 120-122, 127 (e.g. #7), 129 #49-#50, 228-231, 235 #33, 251 #11, #15</p> <p><i>Problem Solving Strategy</i> 226-227, 488-489</p> <p>Teacher Wraparound Edition: A 121, 227; DI 120</p>
<p>7.N.9 Select and use appropriate operations—addition, subtraction, multiplication, division, and positive integer exponents—to solve problems with rational numbers (including negatives). <i>This standard is intentionally the same as standard 8.N.12.</i></p>	<p>Student Edition: 59 #17, 92-95, 99, 112 #16, 113 #19, 649 #15-#16</p> <p><i>Web Quest</i> 3, 253, 465</p> <p><i>Problem Solving Strategy</i> 226, 276, 488</p> <p>Teacher Wraparound Edition: A 49, 97; B 92; PS 111</p>
<p>Patterns, Relations, and Algebra Strand</p> <p><i>Students engage in problem solving, communicating, reasoning, connecting, and representing as they:</i></p>	
<p>7.P.1 Extend, represent, analyze, and generalize a variety of patterns with tables, graphs, words, and, when possible, symbolic expressions. Include arithmetic and geometric progressions, e.g., compounding. <i>This standard is intentionally the same as standard 8.P.1.</i></p>	<p>Student Edition: 7, 9, 10, 99, 322 #22, 512-515, 520 #29-#31, 525 #32, 530 #4-#6, 552, 608, 658 #1-#3</p> <p><i>Problem Solving Strategy</i> 96-97, 537-538</p> <p><i>Hands-On Lab</i> 304-305, 516</p> <p><i>Web Quest</i> 371</p> <p>Teacher Wraparound Edition: A 515; B 512; DI 513; ICE 513</p>

STANDARDS		PAGE REFERENCES
7.P.2	Evaluate simple algebraic expressions for given variable values, e.g., $3a^2 - b$ for $a = 3$ and $b = 7$. <i>This standard is intentionally the same as standard 8.P.2.</i>	Student Edition: 11-15, 29 (e.g. #5, #6), 30 #34-#41, 32 #5, 36 (e.g. #7), 38 #49-#56, 57 #3-#5, 73 (e.g. #4), 74 #24-#27 Teacher Wraparound Edition: ICE 12, 13, 29 #5, #6
7.P.3	Create and use symbolic expressions for linear relationships and relate them to verbal, tabular, and graphical representations.	Student Edition: 522-525, 529 #33-#35, 533-536, 544-547, 554, 555 #15-#17 <i>Graphing Calculator Investigation 532</i> Teacher Wraparound Edition: A 525, 547; DI 523; ICE 534
7.P.4	Solve linear equations using tables, graphs, models, and algebraic methods.	Student Edition: 522-525, 529 #33-#35, 533-536, 544-547, 554, 555 #15-#17 <i>Graphing Calculator Investigation 532</i> Teacher Wraparound Edition: A 525, 547; DI 523; ICE 534
7.P.5	Identify, describe, and analyze linear relationships between two variables. Compare positive rate of change, e.g., $y = 3x + 1$, to negative rate of change, e.g., $y = -3x + 1$.	Student Edition: 522-525, 529 #33-#35, 533-536, 544-547, 554, 555 #15-#17 <i>Graphing Calculator Investigation 532</i> Teacher Wraparound Edition: A 525, 547; DI 523; ICE 534
7.P.6	Use linear equations to model and analyze problems involving proportional relationships. Use technology as appropriate. <i>This standard is intentionally the same as standard 8.P.9.</i>	Student Edition: <i>Graphing Calculator Investigation 532</i>
Geometry Strand <i>Students engage in problem solving, communicating, reasoning, connecting, and representing as they:</i>		
7.G.1	Analyze, apply, and explain the relationship between the number of sides and the sums of the interior angle measures of polygons.	Student Edition: 258, 262-265, 272-275, 310 #6, 653 #1, #2, #3 <i>Hands-On Lab 278</i> Teacher Wraparound Edition: A 275; DI 257

STANDARDS	PAGE REFERENCES
<p>7.G.2 Classify figures in terms of congruence and similarity, and apply these relationships to the solution of problems. <i>This standard is intentionally the same as standard 8.G.2.</i></p>	<p>Student Edition: 178-182, 187 #25, 203 #13, 279-282, 289 #25, 294 #37, 307 #21-#24, 309 <i>Spreadsheet Investigation</i> 356-357 <i>Web Quest</i> 253</p> <p>Teacher Wraparound Edition: A 282; B 279; DI 280; ICE 179-180; TNT 281</p>
<p>7.G.3 Demonstrate an understanding of the relationships of angles formed by intersecting lines, including parallel lines cut by a transversal. <i>This standard is intentionally the same as standard 8.G.3.</i></p>	<p>Student Edition: 256-260, 265 #36-#39, 270 #24-#27, 284 #3-#4, 306, 309 #3-#5, 653 #4 <i>Hands-On Lab</i> 261</p> <p>Teacher Wraparound Edition: A 259; DI 257</p>
<p>7.G.4 Graph points and identify coordinates of points on the Cartesian coordinate plane (all four quadrants).</p>	<p>Student Edition: 142-145, 148 #42-#48, 149 #18, #19, 291 (e.g. #2, #3), 297 (e.g. #2, #3), 301 (e.g. #1), 311 #17</p> <p>Teacher Wraparound Edition: ICE 143, 301</p>
<p>7.G.5 Use a ruler, protractor, and compass to draw polygons and circles.</p>	<p>Student Edition: <i>Hands-On Lab</i> 261, 266, 271, 278, 283 <i>Hands-On Mini Lab</i> 262, 319</p> <p>Teacher Wraparound Edition: A 269</p>
<p>7.G.6 Predict the results of translations and reflections of figures on unmarked or coordinate planes and draw the transformed figure.</p>	<p>Student Edition: 290-294, 296-299, 308 #29-#34, 309 #17-#18 <i>Hands-On Lab</i> 304-305</p> <p>Teacher Wraparound Edition: A 294, 299; B 290; DI 291; ICE 291, 292</p>
<p>7.G.7 Identify three-dimensional figures (e.g., prisms, pyramids) by their physical appearance, distinguishing attributes, and spatial relationships such as parallel faces. <i>This standard is intentionally the same as standard 8.G.7.</i></p>	<p>Student Edition: 331-334, 339 #40, 340 #7, 345 #33, 364 #22, #23, 654 #5</p> <p>Teacher Wraparound Edition: ICE 332</p>

STANDARDS	PAGE REFERENCES
<p>Measurement Strand <i>Students engage in problem solving, communicating, reasoning, connecting, and representing as they:</i></p>	
<p>7.M.1 Select, convert (within the same system of measurement), and use appropriate units of measurement or scale. <i>This standard is intentionally the same as standard 8.M.1.</i></p>	<p>Student Edition: 52 #36-#39, 184-187, 338 #27-#29, 358-362, 366 #38-#45, 604-605, 606-607 Teacher Wraparound Edition: A 187; ICE 185</p>
<p>7.M.2 Given the formulas, convert from one system of measurement to another. Use technology as appropriate. <i>This standard is intentionally the same as standard 8.M.2.</i></p>	<p>Student Edition: 173 #39-#42, 529 #36, 606-607, 648 #2, #3 <i>Web Quest</i> 253 Teacher Wraparound Edition: A 95</p>
<p>7.M.3 Demonstrate an understanding of the concepts and apply formulas and procedures for determining measures, including those of area and perimeter/circumference of parallelograms, trapezoids, and circles. Given the formulas, determine the surface area and volume of rectangular prisms and cylinders. Use technology as appropriate.</p>	<p>Student Edition: 314-318, 319-323, 335-339, 347-351, 362 #47, 363, 365, 369 #16, 613 Teacher Wraparound Edition: A 338; ICE 336, 337, 348; PC 312F; TNT 315, 320, 347</p>
<p>Data Analysis, Statistics, and Probability Strand <i>Students engage in problem solving, communicating, reasoning, connecting, and representing as they:</i></p>	
<p>7.D.1 Select, create, interpret, and utilize the following tabular and graphical representations of data: circle graphs, Venn diagrams, stem-and-leaf plots, tables, and charts.</p>	<p>Student Edition: 420-424, 426-429, 430-433, 462 #8, 603, 656 #1-#5 <i>Problem Solving Strategy</i> 123-124, 418-419, 537-538 <i>Hands-On Lab</i> 434 Teacher Wraparound Edition: A 429; PS 461</p>
<p>7.D.2 Find, describe, and interpret appropriate measures of central tendency (mean, median, and mode) and spread (range) that represent a set of data. Use these notions to compare different sets of data. <i>This standard is intentionally the same as standard 8.D.3.</i></p>	<p>Student Edition: 435-438, 442-445, 449 #24, 461 #7-#9, 656 #6, #7, 673 #20, 677 #8c <i>Spreadsheet Investigation</i> 439 Teacher Wraparound Edition: A 437; B 435; DI 436; ICE 443</p>

STANDARDS	PAGE REFERENCES
<p>7.D.3 Use tree diagrams, tables, organized lists, and area models to compute probabilities for simple compound events, e.g., multiple coin tosses or rolls of number cubes.</p>	<p>Student Edition: 380-383, 396-399, 403 #26, #27, 409 #25-#26, 412, 673 <i>Hands-On Lab</i> 392-393 <i>Problem Solving Strategy</i> 378-379</p> <p>Teacher Wraparound Edition: A 399, 403; B 396; ICE 381, 397</p>
<p>Grade 8</p> <hr/> <p>Number Sense and Operations</p> <p>Understand numbers, ways of representing numbers, relationships among numbers, and number systems</p> <p>Understand meanings of operations and how they relate to one another</p> <p>Compute fluently and make reasonable estimates</p> <hr/> <p><i>Students engage in problem solving, communicating, reasoning, connecting, and representing as they:</i></p>	
<p>8.N.1 Compare, order, estimate, and translate among integers, fractions and mixed numbers (i.e., rational numbers), decimals, and percents.</p>	<p>Student Edition: 62-66, 67-70, 75 #37-#40, 86 #7-#10, 109 #21-#25, 207 #3-#5, 210-214 <i>The Game Zone</i> 33</p> <p>Teacher Wraparound Edition: A 70; DI 68, 211; ICE 63-64, 68, 207</p>
<p>8.N.2 Define, compare, order, and apply frequently used irrational numbers, such as $\sqrt{2}$ and π.</p>	<p>Student Edition: 121 #1, 125-129, 130 #2, 136 #38-#39, 140 #25, 319-323 <i>Hands-On Lab</i> 141</p> <p>Teacher Wraparound Edition: A 122; DI 120, 126-127, 320; ICE 126, 320-321</p>
<p>8.N.3 Use ratios and proportions in the solution of problems, in particular, problems involving unit rates, scale factors, and rate of change.</p>	<p>Student Edition: 156-159, 160-164, 169 #24, 171 (e.g. #3), 172 #31-#35, 173 #36-#37, 179-180, 182 #22, 184-187, 202 #6, 203 #14 <i>Web Quest</i> 154 <i>Spreadsheet Investigation</i> 165</p> <p>Teacher Wraparound Edition: A 159, 182; DI 157, 161; ICE 185</p>
<p>8.N.4 Represent numbers in scientific notation, and use them in calculations and problem situations.</p>	<p>Student Edition: 104-107, 110 #58-#65, 111 #23-#24, 112 #9-#10, 119 #51, 122 #40, 649 #18-#20</p> <p>Teacher Wraparound Edition: A 107; DI 105</p>

STANDARDS	PAGE REFERENCES
<p>8.N.5 Apply number theory concepts, including prime factorization and relatively prime numbers, to the solution of problems.</p>	<p>Student Edition: 609, 610</p>
<p>8.N.6 Demonstrate an understanding of absolute value, e.g., $-3 = 3 = 3$.</p>	<p>Student Edition: 19-21, 25 (e.g. #5), 27 #47, 31 #51-#52, 32 #9-#12, 38 #48, 55 #23-#24, 57 #1, 59 #14</p> <p>Teacher Wraparound Edition: A 21; DI 18; TNT 19</p>
<p>8.N.7 Apply the rules of powers and roots to the solution of problems. Extend the Order of Operations to include positive integer exponents and square roots.</p>	<p>Student Edition: 11-12, 14 #9, 98-101, 107 #46, 110 #50-#57, 111 #21-#22, 112 #7, 113 #17-#18, 114, 116-119</p> <p>Teacher Wraparound Edition: A 101; DI 117; ICE 99, 117</p>
<p>8.N.8 Demonstrate an understanding of the properties of arithmetic operations on rational numbers. Use the associative, commutative, and distributive properties; properties of the identity and inverse elements (e.g., $-7 + 7 = 0$; $3/4 \times 4/3 = 1$); and the notion of closure of a subset of the rational numbers under an operation (e.g., the set of odd integers is closed under multiplication but not under addition).</p>	<p>Student Edition: 11-15, 21 #64-#66, 25, 31 #47, #53, 32 #1, 38 #62-#64, 50 (e.g. #1), 55 #13-#18, 58 #3</p> <p>Teacher Wraparound Edition: A 15, 31</p>
<p>8.N.9 Use the inverse relationships of addition and subtraction, multiplication and division, and squaring and finding square roots to simplify computations and solve problems, e.g., multiplying by $1/2$ or 0.5 is the same as dividing by 2.</p>	<p>Student Edition: 25-26, 28-29, 35 (e.g. #4), 45-49, 50-53, 56 #46-#58, 57 #23-#29, 58 #9, 76-77, 116-119</p> <p>Teacher Wraparound Edition: A 31, 80; B 28, 50; DI 117; ICE 77</p>
<p>8.N.10 Estimate and compute with fractions (including simplification of fractions), integers, decimals, and percents (including those greater than 100 and less than 1).</p>	<p>Student Edition: 23-27, 28-31, 34-38, 58 #4, #5, 71-75, 76-80, 82-85, 88-91, 92-95, 228-231, 600, 601, 611</p> <p>Teacher Wraparound Edition: A 31, 75, 80; B 76; DI 24, 29, 229; ICE 229</p>
<p>8.N.11 Determine when an estimate rather than an exact answer is appropriate and apply in problem situations.</p>	<p>Student Edition: 9 #7-#12, 15 #41-#42, 64 (e.g. #3), 120-122, 127 (e.g. #7), 129 #49-#50, 228-231, 235 #33, 251 #11, #15</p> <p><i>Problem Solving Strategy</i> 226-227, 488-489</p> <p>Teacher Wraparound Edition: A 121, 227; D 120</p>

STANDARDS	PAGE REFERENCES
<p>8.N.12 Select and use appropriate operations—addition, subtraction, multiplication, division, and positive integer exponents—to solve problems with rational numbers (including negatives).</p>	<p>Student Edition: 48-49, 59 #17, 75 #29, 92-95, 99, 112 #6, 113 #19, 649 #15-#16 <i>Web Quest</i> 3, 253, 465 <i>Problem Solving Strategy</i> 226, 276, 488</p> <p>Teacher Wraparound Edition: A 49, 97; B 92; PS 111</p>
<p>Patterns, Relations, and Algebra Understand patterns, relations, and functions Represent and analyze mathematical situations and structures using algebraic symbols Use mathematical models to represent and understand quantitative relationships Analyze change in various contexts</p> <hr/> <p><i>Students engage in problem solving, communicating, reasoning, connecting, and representing as they:</i></p>	
<p>8.P.1 Extend, represent, analyze, and generalize a variety of patterns with tables, graphs, words, and, when possible, symbolic expressions. Include arithmetic and geometric progressions, e.g., compounding.</p>	<p>Student Edition: 7, 9, 10, 99, 322 #22, 512-515, 520 #29-#31, 525 #32, 530 #4-#6, 552 #9-#13, 608, 658 #1-#3 <i>Problem Solving Strategy</i> 96-97, 537-538 <i>Hands-On Lab</i> 304-305, 516 <i>Web Quest</i> 371</p> <p>Teacher Wraparound Edition: A 515; B 512; DI 513; ICE 513</p>
<p>8.P.2 Evaluate simple algebraic expressions for given variable values, e.g., $3a^2 - b$ for $a = 3$ and $b = 7$.</p>	<p>Student Edition: 11-15, 29 (e.g. #5, #6), 30 #34-#41, 32 #5, 36 (e.g. #7) 38 #49-#56, 57 #3-#5, 73 (e.g. #4), 74 #24-#27</p> <p>Teacher Wraparound Edition: ICE 12, 13, 29 (#5, #6)</p>
<p>8.P.3 Demonstrate an understanding of the identity $(-x)(-y) = xy$. Use this identity to simplify algebraic expressions, e.g., $(-2)(-x+2) = 2x - 4$.</p>	<p>Student Edition: 13, 15 #44, #47, #50, 40 (e.g. #2)</p>
<p>8.P.4 Create and use symbolic expressions and relate them to verbal, tabular, and graphical representations.</p>	<p>Student Edition: 39-42, 49 #49-#50, 53 #49-#50, 56 #42-#45, 58 #7, 469-471</p> <p>Teacher Wraparound Edition: B 39; DI 470; TNT 40</p>

STANDARDS	PAGE REFERENCES
<p>8.P.5 Identify the slope of a line as a measure of its steepness and as a constant rate of change from its table of values, equation, or graph. Apply the concept of slope to the solution of problems.</p>	<p>Student Edition: 166-169, 174 #9-#11, 182 #23-#25, 199 #13-#15, 201 #7-#8, 203 #11-#16, 526-529, 651 #6</p> <p>Teacher Wraparound Edition: A 169; B 526; DI 167; ICE 527</p>
<p>8.P.6 Identify the roles of variables within an equation, e.g., $y = mx + b$, expressing y as a function of x with parameters m and b.</p>	<p>Student Edition: 39, 517-520, 525 #29-#31, 533-536, 553 #29-#33, 556 #6</p> <p>Teacher Wraparound Edition: A 536; B 517; DI 518, 534; PS 555</p>
<p>8.P.7 Set up and solve linear equations and inequalities with one or two variables, using algebraic methods, models, and/or graphs.</p>	<p>Student Edition: 522-525, 529 #34-#35, 530 #8-#10, 533-536, 544-547, 548-551, 554</p> <p><i>Graphing Calculator Investigation 532</i></p> <p>Teacher Wraparound Edition: A 525, 547; DI 523; ICE 534</p>
<p>8.P.8 Explain and analyze—both quantitatively and qualitatively, using pictures, graphs, charts, or equations—how a change in one variable results in a change in another variable in functional relationships, e.g., $C = \pi d$, $A = \pi r^2$ (A as a function of r), $A_{\text{rectangle}} = lw$ ($A_{\text{rectangle}}$ as a function of l and w).</p>	<p>Student Edition: 180 (e.g. #3), 318 #27-#28, 320 (e.g. #1 & #2), 339 #33-#36, 345 #24, 349 #2</p> <p><i>Graphing Calculator Investigation 532</i> <i>Hands-On Mini Lab 335</i></p>
<p>8.P.9 Use linear equations to model and analyze problems involving proportional relationships. Use technology as appropriate.</p>	<p>Student Edition: 544-547</p> <p><i>Graphing Calculator Investigation 532</i></p> <p>Teacher Wraparound Edition: A 547; PS 555</p>
<p>8.P.10 Use tables and graphs to represent and compare linear growth patterns. In particular, compare rates of change and x- and y-intercepts of different linear patterns.</p>	<p>Student Edition: 522-525, 533-536, 547 #39-#41</p> <p>Teacher Wraparound Edition: A 536; DI 523, 534</p>

STANDARDS	PAGE REFERENCES
<p>Geometry</p> <p>Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships</p> <p>Specify locations and describe spatial relationships using coordinate geometry and other representational systems</p> <p>Apply transformations and use symmetry to analyze mathematical situations</p> <p>Use visualization, spatial reasoning, and geometric modeling to solve problems</p> <hr/> <p><i>Students engage in problem solving, communicating, reasoning, connecting, and representing as they:</i></p>	
<p>8.G.1 Analyze, apply, and explain the relationship between the number of sides and the sums of the interior and exterior angle measures of polygons.</p>	<p>Student Edition: 258, 262-265, 272-275, 310 #6, 653 #1, #2, #3 <i>Hands-On Lab</i> 278</p> <p>Teacher Wraparound Edition: A 275; DI 257</p>
<p>8.G.2 Classify figures in terms of congruence and similarity, and apply these relationships to the solution of problems.</p>	<p>Student Edition: 178-182, 187 #25, 203 #13, 279-282, 289 #25, 294 #37, 307 #21-#24, 309 <i>Spreadsheet Investigation</i> 356-357 <i>Web Quest</i> 253</p> <p>Teacher Wraparound Edition: A 282; B 279; DI 280; ICE 179-180; TNT 281</p>
<p>8.G.3 Demonstrate an understanding of the relationships of angles formed by intersecting lines, including parallel lines cut by a transversal.</p>	<p>Student Edition: 256-260, 265 #36-#39, 270 #24-#27, 284 #3, #4, 306, 309 #3-#5, 653 #4 <i>Hands-On Lab</i> 261</p> <p>Teacher Wraparound Edition: A 259; DI 257</p>
<p>8.G.4 Demonstrate an understanding of the Pythagorean theorem. Apply the theorem to the solution of problems.</p>	<p>Student Edition: 132-136, 137-140, 141 #1, 145 #28-#30, 148 #37-#41, 149 #12-#17</p> <p>Teacher Wraparound Edition: A 136; B 137; DI 138; TNT 138</p>
<p>8.G.5 Use a straightedge, compass, or other tools to formulate and test conjectures, and to draw geometric figures.</p>	<p>Student Edition: <i>Hands-On Lab</i> 261, 266, 271, 283 <i>Hands-On Mini Lab</i> 272, 300, 319, 330</p>
<p>8.G.6 Predict the results of transformations on unmarked or coordinate planes and draw the transformed figure, e.g., predict how tessellations transform under translations, reflections, and rotations.</p>	<p>Student Edition: 290-294, 296-299, 300-303, 308 #29-#34, 309 #17-#19, 311 #16, #17 <i>Hands-On Lab</i> 304-305</p> <p>Teacher Wraparound Edition: A 294, 299, 303; B 290; DI 291; ICE 291, 292</p>

STANDARDS		PAGE REFERENCES
8.G.7	Identify three-dimensional figures (e.g., prisms, pyramids) by their physical appearance, distinguishing attributes, and spatial relationships such as parallel faces.	Student Edition: 331-334, 339 #40, 340 #7, 345 #33, 364 #22, #23, 654 #5 Teacher Wraparound Edition: ICE 332
8.G.8	Recognize and draw two-dimensional representations of three-dimensional objects, e.g., nets, projections, and perspective drawings.	Student Edition: 332 (e.g. #3), 333 #11-#12, 347, 348 (e.g. #2) <i>Hands-On Lab</i> 330, 346 <i>Hands-On Mini Lab</i> 342 <i>The Game Zone</i> 341 Teacher Wraparound Edition: A 334; DI 331
Measurement Understand measurable attributes of objects and the units, systems, and processes of measurement Apply appropriate techniques, tools and formulas to determine measurements <hr/> <i>Students engage in problem solving, communicating, reasoning, connecting, and representing as they:</i>		
8.M.1	Select, convert (within the same system of measurement), and use appropriate units of measurement or scale.	Student Edition: 52 #36-#39, 184-187, 338 #27-#29, 358-362, 366 #38-#45, 604-605, 606-607 Teacher Wraparound Edition: A 187; ICE 185
8.M.2	Given the formulas, convert from one system of measurement to another. Use technology as appropriate.	Student Edition: 606-607, 648 #2, #3 <i>Web Quest</i> 253 Teacher Wraparound Edition: A 95
8.M.3	Demonstrate an understanding of the concepts and apply formulas and procedures for determining measures, including those of area and perimeter/circumference of parallelograms, trapezoids, and circles. Given the formulas, determine the surface area and volume of rectangular prisms, cylinders, and spheres. Use technology as appropriate.	Student Edition: 314-318, 319-323, 335-339, 347-351, 362 #47, 363 #10-#13, 365 #24-#32, 369 #16, 613 Teacher Wraparound Edition: A 338; ICE 336, 337, 348; PC 312F; TNT 315, 320, 347
8.M.4	Use ratio and proportion (including scale factors) in the solution of problems, including problems involving similar plane figures and indirect measurement.	Student Edition: 159 #35, 170-173, 178-182, 184-187, 188-191, 197 #28, 199 #21-#23, 200, 203 #14, #15 Teacher Wraparound Edition: A 159, 173, 182; B 188, 194

STANDARDS		PAGE REFERENCES
8.M.5	Use models, graphs, and formulas to solve simple problems involving rates, e.g., velocity and density.	Student Edition: 129 #49, 156-159, 345 #21-#24, 651 #1-#2 Teacher Wraparound Edition: ICE 93 #5
Data Analysis, Statistics, and Probability Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them Select and use appropriate statistical methods to analyze data Develop and evaluate inferences and predictions that are based on data Understand and apply basic concepts of probability <hr/> <i>Students engage in problem solving, communicating, reasoning, connecting, and representing as they:</i>		
8.D.1	Describe the characteristics and limitations of a data sample. Identify different ways of selecting a sample, e.g., convenience sampling, responses to a survey, random sampling.	Student Edition: 406-409, 412 #46-#49, 413 #2, #20, 414 #7, 424 #26, 429 #16, 431 (e.g. #2), 656 #4 Teacher Wraparound Edition: A 409; B 406; DI 407
8.D.2	Select, create, interpret, and utilize various tabular and graphical representations of data, e.g., circle graphs, Venn diagrams, scatterplots, stem-and-leaf plots, box-and-whisker plots, histograms, tables, and charts. Differentiate between continuous and discrete data and ways to represent them.	Student Edition: 420-424, 426-429, 430-433, 446-449, 450-453, 539-542 <i>Graphing Calculator Investigation</i> 425, 543 <i>Hands-On Lab</i> 434 Teacher Wraparound Edition: A 429; DI 421; PS 461
8.D.3	Find, describe, and interpret appropriate measures of central tendency (mean, median, and mode) and spread (range) that represent a set of data. Use these notions to compare different sets of data.	Student Edition: 435-438, 442-445, 449 #24, 461 #7-#9, 656 #6-#7, 673 #20, 677 #8c <i>Spreadsheet Investigation</i> 439 Teacher Wraparound Edition: A 437; B 435; DI 436; ICE 443
8.D.4	Use tree diagrams, tables, organized lists, basic combinatorics (“fundamental counting principle”), and area models to compute probabilities for simple compound events, e.g., multiple coin tosses or rolls of dice.	Student Edition: 380-383, 386 #27-#28, 394 #11, 396-399, 403 #26-#27, 409 #25-#26, 673 #18 <i>Hands-On Lab</i> 392-393 Teacher Wraparound Edition: A 399, 403; B 396; ICE 397