



Math Connects

Concepts, Skills, and Problem Solving

Course 3

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STANDARDS	PAGE REFERENCES
1. Place Value	
<p>A. Identify alternative forms of expressing numbers using scientific notation.</p>	<p>Student Edition: 130-133, 147 #45, 151 #37, 293 #31, 426 #54, 674, 701 #19, #20, 720 #4 <i>Practice Test</i> 139 #18-#20 <i>Study Guide and Review</i> 138 (2-10) <i>Test Practice</i> 140 #2, #7, 184 #3, 301 #10</p> <p>Teacher Edition: AE 131; FMC 131; ODI 130a; T 130</p>
2. Pictorial Representation of Numbers	
Not tested	
3. Equivalent Fractions, Decimals and Percents	
<p>A. Rename fractions and mixed numbers as equivalent decimals and vice versa.</p>	<p>Student Edition: 84-89, 92 #3, 95 #43, 101 #58-#60, 701 #1-#3 <i>Mid-Chapter Quiz</i> 113 #1-#3 <i>Practice Test</i> 139 #1-#3 <i>Study Guide and Review</i> 135 (2-1)</p> <p>Teacher Edition: AE 86; ODI 91a; PA 86</p>

STANDARDS	PAGE REFERENCES
B. Rename fractions and decimals as equivalent percents and vice versa.	Student Edition: 253-254, 256-261, 267 #34, 704 #1-#4 <i>Mid-Chapter Quiz</i> 274 #1-#11 Teacher Edition: AE 253, 257; FMC 257; ODI 256a, 268a
C. Identify and/or shade decimals, fractions or percents of regions or sets.	Student Edition: 96, 253, 255 <i>Test Practice</i> 301 #14 Teacher Edition: ODI 84a, 96a, 275a Teacher Resources <i>Enrichment</i> 14, 43
4. Order, Magnitude and Rounding of Numbers	
A. Order fractions and decimals including mixed numbers in context.	Student Edition: 91-95 <i>Mid-Chapter Quiz</i> 113 #8
B. Describe magnitude or order of mixed numbers, fractions and decimals in context.	Student Edition: 131-133, 553 #32, #34, #39, #40 <i>Practice Test</i> 139 #20 Teacher Edition: AE 131; ODI 130a; TNT 133
C. Round mixed numbers, fractions and decimals in context.	Student Edition: 87 #26, #29, 115 #4, 133 #33, 157 #7, 213 #22-#25, 290 #1, 702 <i>Mid-Chapter Quiz</i> 160 #10-#17, 274 #22 Teacher Edition: AE 163; ODI 119a
D. Locate points on number lines and scales, including fractions, mixed numbers, decimals and integers.	Student Edition: 94 #30-#33, 95 #42, 156, 157, 159 #42, 573 #1-#2 <i>Mid-Chapter Quiz</i> 160 #18 Teacher Edition: ODI 41a, 155a; TNT 95

STANDARDS	PAGE REFERENCES
5. Models for Operations	
A. Identify the appropriate operation or equation to solve a story problem.	Student Edition: 24-27, 28 #12, 33 #44, 57-61, 69 #27, 73 #32, 111 #43, 121 #22, 147 #39, 429 #10-#15, 430 #27 <i>Start Smart</i> 4, 5, 8, 9 <i>Study Guide and Review</i> 455 Teacher Edition: A 9, 431; PAP 435
B. Write a story problem from an equation.	Student Edition: 122 #39, 170 #17, 431 #29 <i>Start Smart</i> 8, 9 Teacher Edition: A 9; DI 59
6. Basic Facts	
Not tested	
7. Computation with Whole Numbers and Decimals	
A. Add and subtract 3-, 4- and 5-digit whole numbers, money amounts and decimals.	Student Edition: 27 #7, 34 #54, 39 #54, 43 #6, 724 #4 <i>Mid-Chapter Quiz</i> 274 #22 <i>Quick Practice</i> 23 <i>Test Practice</i> 80 #2, 141 #8
B. Multiply 2- and 3-digit whole numbers, money amounts and decimals by 1- or 2-digit numbers and decimals. Divide 2- and 3- digit whole numbers, money amounts and decimals by 1-digit whole numbers and decimals.	Student Edition: 26 #2, 28 #8, 55 #30 <i>Problem-Solving Investigation</i> 63 #9, 125 #7, 273 #4 <i>Quick Practice</i> 23 <i>Start Smart</i> 4, 5 <i>Test Practice</i> 80 #2, 349 #10
C. Multiply and divide whole numbers and decimals by 10, 100, 1,000, 0.1 and 0.01.	Student Edition: 32 #24, 127, 545 <i>Problem-Solving Investigation</i> 125 #12, 217 #7 <i>Reading to Solve Problems</i> 262 <i>Study Guide and Review</i> 75 (1-1) <i>Study Tip</i> 256, 269

STANDARDS	PAGE REFERENCES
8. Computation with Fractions and Integers	
A. Add and subtract fractions and mixed numbers with reasonable and appropriate denominators.	Student Edition: 108-112, 114-118, 701 <i>Study Guide and Review</i> 136 (2-5), 137 (2-6) <i>Test Practice</i> 140 #6 Teacher Edition: AE 109, 115; PC 82E
B. Multiply whole numbers and fractions by fractions and mixed numbers.	Student Edition: 98 #4, #5, 99 #27, 104, 123 #48, 724 #3 <i>Mid-Chapter Quiz</i> 113 #14 <i>Practice Test</i> 139 #5, #11 <i>Problem-Solving Investigation</i> 125 #14
C. Add or multiply positive and negative integers.	Student Edition: 41-45, 51-56, 69 #26 <i>Algebra Lab</i> 40 <i>Mid-Chapter Quiz</i> 50 #9-#18 <i>Practice Test</i> 79 #9-#16 <i>Study Guide and Review</i> 76 (1-4), 77 (1-6) <i>Test Practice</i> 80 #7 Teacher Edition: AE 42, 43, 52; ODI 41a, 51a; PA 45; T 51
9. Solve Word Problems	
A. Solve multistep problems involving fractions, mixed numbers, decimals and money amounts with or without extraneous information.	Student Edition: 28 #8, 34 #54, 55 #57, 69 #33, 111 #39, 700 #5, #6, #11, 701 <i>Practice Test</i> 183 #11 <i>Problem-Solving Investigation</i> 63 #6, #9, 217 #14, 273 #4 <i>Test Practice</i> 140 #6, 141 #9, 184 #6 Teacher Edition: AE 98
B. Solve multistep problems involving whole numbers, mixed numbers, money amounts and decimals.	Student Edition: 28 #8, 55 #57, 69 #33, 98, 99 #27, 111 #39, 700 #5, #6, #11, 701 <i>Mid-Chapter Quiz</i> 160 #19, #20 <i>Practice Test</i> 140 #6, 141 #9, 183 #11 <i>Problem-Solving Investigation</i> 63 #6, #9 <i>Test Practice</i> 184 #6

STANDARDS	PAGE REFERENCES
C. Solve multistep problems involving whole numbers, fractions, mixed numbers, decimals or money amounts, and explain how the solution was determined.	Student Edition: 33 #41-#43, 55 #57 <i>Mid-Chapter Quiz</i> 160 #20 <i>Practice Test</i> 183 #11
10. Numerical Estimation Strategies	
Not tested	
11. Estimating Solutions to Problems	
A. Determine a reasonable estimate, and describe the strategy used to arrive at the estimate.	Student Edition: 26 #2, 157 #7, 435 #3, 704 #10, 705 #6 <i>Mid-Chapter Quiz</i> 274 #21, #22 <i>Practice Test</i> 299 <i>Problem-Solving Investigation</i> 272-273, 314-315, 438-439 <i>Study Guide and Review</i> 297 (5-5), (5-6) Teacher Edition: ODI 272a, 275a, 438a
B. Given an estimate as a solution for problems involving whole numbers, mixed numbers, decimals and percents, judge its reasonableness and justify the decision.	Student Edition: 26 #2, 157 #7, 275-278, 704 #10, 705 #6 <i>Mid-Chapter Quiz</i> 274 #21, #22 <i>Problem-Solving Investigation</i> 272, 273, 314-315 <i>Test Practice</i> 80 #1 Teacher Edition: AE 276; ODI 272a, 275a
12. Ratios and Proportions	
A. Solve problems involving ratios.	Student Edition: 190-193 <i>Mid-Chapter Quiz</i> 215 #1-#3 <i>Practice Test</i> 247 #1 <i>Study Guide and Review</i> 243 (4-1) Teacher Edition: AE 191; TNT 192

STANDARDS	PAGE REFERENCES
B. Solve problems involving proportions in context.	Student Edition: 210-214, 232-235, 236-241, 703 <i>Mid-Chapter Quiz</i> 215 #18, #19 <i>Practice Test</i> 247 <i>Study Guide and Review</i> 244 (4-5), 246 (4-9), (4-10) <i>Test Practice</i> 248 #1, 249 #9 Teacher Edition: ODI 210a, 232a
C. Solve multistep problems involving ratio or proportion, and explain how the solution was determined.	Student Edition: 192-193, 214 #27, 223 Teacher Edition: AE 191 #4
13. Computation with Percents	
A. Find percents of whole numbers or the percent a given number is of another number.	Student Edition: 263-267, 271 #38, 279-283, 289 #33 <i>Mid-Chapter Quiz</i> 274 <i>Study Guide and Review</i> 298 (5-7) Teacher Edition: AE 264, 265, 280; FMC 264; ODI 263a, 268a
B. Solve problems involving percents in context.	Student Edition: 265-266, 270, 276-278, 290-293, 704, 724 #4 <i>Mid-Chapter Quiz</i> 274 <i>Practice Test</i> 299 #25 <i>Spreadsheet Lab</i> 294 <i>Start Smart</i> 14, 15 <i>Test Practice</i> 300, 301, 349 #10 Teacher Edition: AE 265, 291; ODI 290a
14. Time	
Not tested	
15. Approximating Measures	
A. Estimate lengths, areas, volumes and angle measures.	Student Edition: 149 #3d, 150 #28, 310 #36, 354 #3, 365 <i>Measurement Lab</i> 362 <i>Study Tip</i> 374, 375 Teacher Edition: AE 307, 364; ODI 363a

STANDARDS	PAGE REFERENCES
16. Customary and Metric Measures	
A. Measure and determine perimeters, areas and volumes. Explain or show how the solution was determined.	<p>Student Edition: 25, 27 #1, 45 #50, 101 #54, 147 #43, 158 #10, 221, 739-741 <i>Mid-Chapter Quiz</i> 50 #5 <i>Practice Test</i> 409 <i>Start Smart</i> 12, 13</p> <p>Teacher Edition: PC 350E</p>
B. Determine perimeters, areas and volumes.	<p>Student Edition: 45 #50, 101 #31-#32, 123 #47, 129 #46, 147 #43, 158 #10, 221, 354, 373-377, 380-384, 739-741 <i>Mid-Chapter Quiz</i> 50 #5 <i>Practice Test</i> 409, 459 <i>Real-World Unit Project</i> 303</p> <p>Teacher Edition: AE 221; PC 350E</p>
C. Solve problems involving conversions and/or operations within customary or metric units of measure.	<p>Student Edition: 32 #7, #23, 72 #22-#26, 192 #23, 705 #5, 742, 743 <i>Test Practice</i> 249 #8</p> <p>Teacher Edition: PA 122</p>
17. Geometric Shapes and Properties	
A. Identify, describe or classify 2- and 3-dimensional geometric shapes and figures.	<p>Student Edition: 311 #38, 316-319, 368-372, 737, 738 <i>Geometry Lab</i> 312-313 <i>Mid-Chapter Quiz</i> 379 #8</p> <p>Teacher Edition: AE 369; ODI 320a, 368a</p>
B. Draw, describe and classify 2- and 3-dimensional geometric shapes and figures.	<p>Student Edition: 368-372 <i>Geometry Lab</i> 312, 313 <i>Mid-Chapter Quiz</i> 379 #8</p> <p>Teacher Edition: ODI 316a, 368a; PSI 216a</p>

STANDARDS	PAGE REFERENCES
18. Spatial Relationships	
A. Identify congruent and similar figures.	<p>Student Edition: 218-223, 225-230, 232-235, 320-325 <i>Geometry Lab</i> 324-325 <i>Practice Test</i> 247 #9-#11, 347 #6-#8 <i>Spreadsheet Lab</i> 231 <i>Study Guide and Review</i> 245 (4-7), 246 (4-8), (4-9), 345 (6-4)</p> <p>Teacher Edition: ODI 232a</p>
B. Draw, classify, describe and/or explain why figures are similar.	<p>Student Edition: 218-223, 225-230, 232-235 <i>Geometry Lab</i> 224 <i>Practice Test</i> 231 <i>Real-World Unit Project</i> 187 <i>Spreadsheet Lab</i> 231 <i>Study Guide and Review</i> 245 (4-7), 246 (4-8), (4-9)</p> <p>Teacher Edition: ODI 218a, 232a</p>
C. Locate and draw points on four-quadrant coordinate grids.	<p>Student Edition: 173-178 <i>Practice Test</i> 183 #23-#25 <i>Study Guide and Review</i> 182 (3-7) <i>Test Practice</i> 348 #1</p> <p>Teacher Edition: ODI 173a, 332a</p>
D. Identify geometric transformations (reflections, rotations and translations).	<p>Student Edition: 332-336, 337-341 <i>Practice Test</i> 347 (14-16) <i>Study Guide and Review</i> 345 (6-6), 346 (6-7)</p> <p>Teacher Edition: AE 333; FMC 338</p>
E. Draw geometric transformations (reflections, rotations and translations).	<p>Student Edition: 332-336, 337-341, 431 #40 <i>Practice Test</i> 347 (14-16) <i>Study Guide and Review</i> 345 (6-6), 346 (6-7)</p> <p>Teacher Edition: AE 333</p>

STANDARDS	PAGE REFERENCES
F. Relate 2- and 3-dimensional representations and vice versa.	Student Edition: 380, 386, 388, 393, 396 #20 <i>Measurement Lab</i> 385, 392 <i>Test Practice</i> 665 #8 Teacher Edition: DI 388; TT 385
19. Tables, Graphs and Charts	
A. Identify correct information from tables, graphs and charts.	Student Edition: 38 #39-#42, 288 #26, 443 #30-#33, 533 #47, 586, 749 <i>Practice Test</i> 79 #1 <i>Problem-Solving Investigation</i> 508-509 <i>Start Smart</i> 14, 15 <i>Test Practice</i> 664 #6
B. Create graphs from data in tables and charts.	Student Edition: 38 #39-#42, 475-480, 515 #31-#33, 584-588 <i>Mid-Chapter Quiz</i> 598 #5 <i>Problem-Solving Investigation</i> 508-509 <i>Real-World Unit Project</i> 413 <i>Spreadsheet Lab</i> 589-590 <i>Start Smart</i> 14-15 <i>Study Guide and Review</i> 522 (9-8) Teacher Edition: AE 509; ODI 475a, 574a
20. Statistics and Data Analysis	
A. Draw reasonable conclusions from data in tables, graphs and charts.	Student Edition: 38 #39-#42, 106 #35-#36, 433 #47, 700 #5-#6 <i>Mid-Chapter Quiz</i> 113 #11, 274 #11 <i>Practice Test</i> 79 #1 <i>Problem-Solving Investigation</i> 508-509 <i>Real-World Unit Project</i> 413, 571 <i>Start Smart</i> 14, 15 <i>Study Guide and Review</i> 522 (9-8) Teacher Edition: AE 509

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<p>B. State a conclusion and explain why an answer is or is not reasonable based on the data.</p>	<p>Student Edition: 38 #39-#42, 514 #20-#22 <i>Mid-Chapter Quiz</i> 274 #11 <i>Problem-Solving Investigation</i> 508-509 <i>Start Smart</i> 14-15 Teacher Edition: P15</p>
<p>C. Solve problems involving means, medians, modes and ranges of sets of data.</p>	<p>Student Edition: 591-596, 599-604, 616 #29, #30, 710 <i>Mid-Chapter Quiz</i> 598 #7-#9 <i>Real-World Unit Project</i> 571 <i>Spreadsheet Lab</i> 597 <i>Study Guide and Review</i> 624 (11-4), 625 (11-5) Teacher Edition: AE 592, 600; ODI 591a; PC 572E; T 599</p>
<p>21. Probability</p>	
<p>A. Identify correct solutions to problems involving elementary notions of probability and fairness expressed as fractions, decimals or percents.</p>	<p>Student Edition: 632-636, 642 #37, 643-647, 711, 746 <i>Mid-Chapter Quiz</i> 652 #1, #2 <i>Probability Lab</i> 648-649 <i>Study Guide and Review</i> 660 (12-1) <i>Test Practice</i> 664-665 Teacher Edition: ODI 632a</p>
<p>B. Solve problems involving elementary notions of probability and fairness expressed as fractions, decimals or percents and justify solutions.</p>	<p>Student Edition: 632-636, 642 #37, 643-647, 711, 746 <i>Mid-Chapter Quiz</i> 652 #1, #2 <i>Probability Lab</i> 648-649 <i>Study Guide and Review</i> 660 (12-1) <i>Test Practice</i> 664-665 Teacher Edition: ODI 632a</p>
<p>C. Solve problems involving expected outcomes or predictions and justify solutions.</p>	<p>Student Edition: 632-636, 643-647 <i>Mid-Chapter Quiz</i> 652 <i>Probability Lab</i> 648-649 <i>Study Guide and Review</i> 660 (12-1), 661 (12-3)</p>

STANDARDS	PAGE REFERENCES
22. Patterns	
<p>A. Identify the missing terms in a pattern, or identify rules for a given pattern using numbers and attributes.</p>	<p>Student Edition: 24-28, 33 #39, #40, 127, 129 #49, 545, 555-558, 559-562, 700, 705 <i>Problem-Solving Investigation</i> 124-125 <i>Study Guide and Review</i> 137 (2-8) Teacher Edition: AE 465; ODI 124a, 464a, 550a, 555a, 559a; TNT 125</p>
<p>B. Extend or complete patterns and state rules for given patterns using numbers and attributes.</p>	<p>Student Edition: 24-28, 33 #39, #40, 127, 129 #49, 545, 555-558, 559-562, 700, 705 <i>Problem-Solving Investigation</i> 124-125 <i>Study Guide and Review</i> 137 (2-8) Teacher Edition: AE 465; ODI 124a, 464a, 550a, 555a, 559a; TNT 125</p>
23. Algebraic Concepts	
<p>A. Solve simple equations, including 2-step equations.</p>	<p>Student Edition: 67-69, 70-73, 119-123, 129 #50, 171 #29, 422-426, 428-431 <i>Mid-Chapter Quiz</i> 440 #10-#13 <i>Practice Test</i> 79 #20-#23, 139 #12-#13 <i>Study Guide and Review</i> 78 (1-9), (1-10), 137 (2-7) Teacher Edition: AE 66, 423, 428; ODI 65a, 70a</p>
<p>B. Solve multistep problems using algebraic concepts.</p>	<p>Student Edition: 422-426, 428-431, 434-437 <i>Algebra Lab</i> 432-433 <i>Mid-Chapter Quiz</i> 440 #10-#13, #21-#24 Teacher Edition: AE 423, 428</p>

STANDARDS	PAGE REFERENCES
C. Evaluate expressions or solve equations and use formulas.	<p>Student Edition: 30-33, 39 #51-#53, 47 #5, #6, 66-69, 70-73, 119-123, 129 #50, 700 <i>Mid-Chapter Quiz</i> 50 #3, #4 <i>Practice Test</i> 79 #4, #25, 139 #12-#13, #15-#16 <i>Study Guide and Review</i> 75 (1-2), 137 (2-7) <i>Test Practice</i> 81 #13</p> <p>Teacher Edition: AE 30, 66, 120; PA 122</p>
D. Represent situations with algebraic expressions or equations.	<p>Student Edition: 57-61, 119-123, 129 #50, 171 #29, 700 <i>Practice Test</i> 79 #18, #25 <i>Start Smart</i> 8-9 <i>Test Practice</i> 80 #4</p> <p>Teacher Edition: AE 58; ODI 57a; PA 61</p>
E. Write an expression or equation to represent a situation.	<p>Student Edition: 57-61, 119-123, 129 #50, 171 #29, 416-420, 427-431, 434-437, 700, 707 <i>Practice Test</i> 79 #25, 459 #11 <i>Start Smart</i> 8-9 <i>Study Guide and Review</i> 77 (1-7), 137 (2-7), 455 (8-2), (8-3) <i>Test Practice</i> 80 #4, #6, 81 #8, 141 #12, #13</p> <p>Teacher Edition: AE 58, 120; PA 61</p>
24. Classification and Logical Reasoning	
A. Solve problems involving the organization of data.	<p>Student Edition: 579 #19, #20, 580 #26, 587 #17, #22, 603 #34, 616 #22 <i>Problem-Solving Investigation</i> 124-125 <i>Real-World Unit Project</i> 413, 571 <i>Spreadsheet Lab</i> 589-590 <i>Test Practice</i> 628 #1</p> <p>Teacher Edition: ODI 124a</p>

STANDARDS	PAGE REFERENCES
<p>B. Sort or classify objects, and draw logical conclusions from data including Venn diagrams, combinations, permutations and transitive reasoning questions.</p>	<p>Student Edition: 159 #43, 619 #13 <i>Mid-Chapter Quiz</i> 160 #20 <i>Problem-Solving Investigation</i> 152-153 <i>Practice Test</i> 183 #11 <i>Study Guide and Review</i> 180(3-3)</p> <p>Teacher Edition: ODI 152a</p> <p>Note: Combinations and permutations are covered in Glencoe's <i>Pre-Algebra</i> © 2008 page 676. For references to transitive questions, see Glencoe's <i>Algebra 1</i> © 2008.</p>
25. Mathematical Applications	
<p>A. Solve extended numerical, statistical and spatial problems.</p>	<p>Student Edition: <i>Test Practice</i> 81 #14, 141 #14, 185 #16, 249 #14, 301 #14, 349 #11, 411 #11, 525 #9, 569 #10, 629 #11</p>