



Math Connects

Concepts, Skills, and Problem Solving

Course 1

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STANDARDS

PAGE REFERENCES

Strand 1: Number Sense and Operations

1. Number Sense

1. Translate between rational numbers including fractions, decimals, percents, or ratios; apply representations of rational numbers including fractions, decimals, percents, or ratios.

Student Edition:

138, 143, 225, 314

Check Your Understanding 227, 231, 316, 367, 379

Example 225, 226, 229, 230, 314, 365, 366, 377, 378

Explore 162, 167-168, 177-178, 364

Extra Practice 683, 687, 690

Get Ready for the Lesson 225, 229, 377

H.O.T. Problems 232 #31-#33

Key Concept 225, 365

Mid-Chapter Quiz 388 #1-#3, #5-#7, #11-#19

Mini Lab 138, 173, 256

Practice and Problem Solving 227, 231, 317, 368, 379

STANDARDS	PAGE REFERENCES
<p>Continued from cell above...</p> <p>1. Translate between rational numbers including fractions, decimals, percents, or ratios; apply representations of rational numbers including fractions, decimals, percents, or ratios.</p>	<p>Continued from cell above...</p> <p>Student Edition: <i>Practice Test</i> 243 #17-#20, 411 #1-#6 <i>Reading to Solve Problems</i> 376 <i>Spiral Review</i> 232 #40-#43, #45, 237 #41-#43, 253 #45-#49, 333 #30, 375 #20-#22, 380 #45-#48, 386 #41, 393 #31, 405 #37-#40, 559 #36-#39, 586 #44-#47, 598 #46-#49 <i>Study Guide and Review</i> 241 #44-#52, 242 #53-#59, 407 #7-#13, 408 #18-#26 <i>Test Practice</i> 413 #8</p> <p>Teacher Edition: AE 226, 230, 366, 378; CG 229a; CU 225a; GU 377a; MC 365a; TNT 139; UGR 365a</p>
<p>2. Use prime factorization to:</p> <ul style="list-style-type: none"> determine the greatest common factor and least common multiples of two whole numbers and express a whole number as a product of its prime factors (including exponents when appropriate). 	<p>Student Edition: <i>Check Your Understanding</i> 30 #5-#9, 34 #7-#9, 199 #3-#6, 218 #3, #4 <i>Example</i> 29, 34, 198, 217 <i>Extra Practice</i> 672, 681, 682 <i>Mid-Chapter Quiz</i> 41 #9-#11, 213 #3, #4 <i>Practice and Problem Solving</i> 30 #22-#33, 35 #26-#33, 200 #13-#22, 218 #12-#17 <i>Practice Test</i> 73 #5, 243 #1, #11, #12 <i>Quick Quiz</i> 195 #6-#10 <i>Spiral Review</i> 40 #36-#39, 333 #31-#34 <i>Study Guide and Review</i> 69 #10-#12, 239 #11-#14, 240 #31-#34 <i>Study Skills</i> 22E <i>Study Tip</i> 29 <i>Test Practice</i> 31, 74 #5, 219 #27 <i>Writing in Math</i> 201</p> <p>Teacher Edition: A 31, 201, 219; CU 32A; FMC 198, 217; TNT 29</p>
<p>3. Demonstrate an understanding of fractions:</p> <ul style="list-style-type: none"> as a rate or as division of whole numbers, as parts of wholes or parts of a set, or as locations on a number line.* 	<p>Student Edition: 209, 221 <i>Explore</i> 202 <i>Mini Lab</i> 209</p> <p>Teacher Edition: T 204</p> <p>Also see <i>Math Connects: Concepts, Skills, and Problem Solving Grade 5</i> © 2009 pages 333-335, 350-353.</p>

STANDARDS	PAGE REFERENCES
<p>4. Compare and order positive fractions, decimals, percents, and negative and positive integers.</p>	<p>Student Edition: <i>Check Your Understanding</i> 143, 222, 573 <i>Concepts and Skills Bank</i> 740 <i>Example</i> 142, 143, 220, 221, 572 <i>Extra Practice</i> 678, 683, 700 <i>Get Ready for the Lesson</i> 142 <i>H.O.T. Problems</i> 145 #33 <i>Key Concept</i> 220 <i>Mid-Chapter Quiz</i> 161 #8-#14, 591 #1-#7 <i>Mini Lab</i> 220 <i>Practice and Problem Solving</i> 144, 223, 574 <i>Practice Test</i> 191 #6, #7, 243 #13-#16, 625 #1-#4 <i>Quick Quiz</i> 137 #15-#18 <i>Real-World Example</i> 573 <i>Spiral Review</i> 149 #36-#38, 154 #40, 166 #52-#54, 201 #45, #46, 212 #42, 228 #42-#45, 232 #44, 286 #57, 339 #42, 375 #25, 581 #53, 586 #43, 635 #50, 641 #58-#61 <i>Start Smart</i> 7 #1-#3 <i>Study Guide and Review</i> 187 #15-#21, 241 #37-#43, 621 #11-#15 <i>Study Tip</i> 573 <i>Test Example</i> 222 <i>Test Practice</i> 192 #1, #7, #9, 224, 244 #4, 575</p> <p>Teacher Edition: A 145; AE 221, 222; DI 144; FMC 221; VC 142a; VKL 220a</p>
<p>5. Express or interpret positive and negative numbers from real-life contexts.*</p>	<p>The following references can be used during teacher/class discussion to meet this standard.</p> <p>Student Edition: <i>Check Your Understanding</i> 123 <i>Example</i> 121 <i>Get Ready for the Lesson</i> 121 <i>Practice and Problem Solving</i> 123-124, 574 #22-#27, 579 #34-#37, 585 #26, #27, 589 #24, #25, #33, 596 #20, #21, #26-#30 <i>Real-World Example</i> 122, 573, 584, 588</p> <p>Teacher Edition: DI 123; NL 121a</p>

STANDARDS	PAGE REFERENCES
6. Express the inverse relationships between exponents and roots for perfect squares and cubes.*	<p>The following references can be linked during teacher/class discussion to meet this standard.</p> <p>Student Edition: 32-33 <i>Concepts and Skills Bank</i> 744</p> <p>Teacher Edition: SQ 32; VD 32a</p>
2. Numerical Operations	
1. Add, subtract, multiply, and divide fractions, decimals, and whole numbers accurately, efficiently, and flexibly in contextual and non-contextual situations.	<p>Student Edition: 156, 169, 179, 256, 263 <i>Check Your Understanding</i> 158, 170, 181, 258, 266, 284, 295 <i>Concepts and Skills Bank</i> 743-744 <i>Example</i> 156, 157, 169, 179, 180, 257, 258, 263, 264, 282, 283, 294 <i>Explore</i> 155, 167-168, 177-178, 261-262, 280-281, 291-292 <i>Extra Practice</i> 579, 680, 685-687 <i>Get Ready for the Lesson</i> 156, 169, 263, 282 <i>Get Ready for the Next Lesson</i> 154, 166, 176, 290 <i>H.O.T. Problems</i> 160 #43, 267 #46, 296 #43 <i>Key Concept</i> 257, 263, 282, 293 <i>Mid-Chapter Quiz</i> 161 #23-#25, 275 #8-#15 <i>Mini Lab</i> 179, 256, 293 <i>Practice and Problem Solving</i> 159, 171, 181, 259, 266, 284, 295</p>

STANDARDS	PAGE REFERENCES
<p>Continued from cell above...</p> <p>1. Add, subtract, multiply, and divide fractions, decimals, and whole numbers accurately, efficiently, and flexibly in contextual and non-contextual situations.</p>	<p>Continued from cell above...</p> <p>Student Edition: <i>Practice Test</i> 191 #14-#24, 307 #6-#9, #18, #19, #22, #23 <i>Quick Quiz</i> 23, 77 #1-#14, 137 #1-#14, 417 <i>Reading to Solve Problems</i> 269 <i>Real-World Example</i> 157, 170, 258, 265, 294 <i>Spiral Review</i> 166 #49, #50, 172 #56, #57, 176 #33-#37, 183 #47-#49, 201 #44, 268 #52-#55, 274 #35-#38, 279 #42-#45, 290 #43-#46, 319 #34, #35 <i>Study Guide and Review</i> 188 #37-#41, 189 #53-#59, 190 #57-#73, 304, 306 #52-#55, #60-#63 <i>Study Skills</i> 246E <i>Test Practice</i> 268, 308 #3, #5 <i>Writing in Math</i> 160</p> <p>Teacher Edition: A 260, 286, 297; AE 157, 170, 180, 257, 258, 264, 265, 282; CU 156a; FMC 170, 180, 283, 294; TNT 157; UM 263a, 282a; UP 169a</p>
<p>2. Divide multi-digit whole numbers and decimals by decimal divisors accurately, efficiently, and flexibly with and without remainders in contextual and non-contextual situations.*</p>	<p>Student Edition: 179 <i>Check Your Understanding</i> 181 <i>Example</i> 179, 180 <i>Explore</i> 177-178 <i>Extra Practice</i> 680 <i>Mini Lab</i> 179 <i>Practice and Problem Solving</i> 181 <i>Practice Test</i> 191 #21-#24 <i>Study Guide and Review</i> 190 #67-#73</p> <p>Teacher Edition: AE 180; FMC 180</p>
<p>3. Provide a mathematical argument to explain operations with two or more fractions.</p>	<p>Student Edition: 260 #31-#33, 267 #45, 293 <i>Example</i> 257, 258, 263, 264, 282, 283 <i>Explore</i> 261-262, 280-281, 291-292 <i>Get Ready for the Lesson</i> 282 <i>Mini Lab</i> 256, 293 <i>Writing in Math</i> 260</p> <p>Teacher Edition: FMC 283; RD 293a; UM 256a, 263a, 282a</p>

STANDARDS	PAGE REFERENCES
<p>4. Apply the commutative, associative, distributive, and identity properties to evaluate numerical expressions involving natural numbers and whole numbers.</p>	<p>The following references can be expanded to meet this standard.</p> <p>Student Edition: 632 <i>Check Your Understanding</i> 634 <i>Concepts and Skills Bank</i> 748 <i>Example</i> 632, 633 <i>Explore</i> 630-631 <i>Get Ready for the Lesson</i> 632 <i>Key Concept</i> 632, 636 <i>Practice and Problem Solving</i> 634 <i>Quick Quiz</i> 519 #1-#4</p> <p>Teacher Edition: AE 633; T 632; TNT 633</p>
<p>5. Simplify numerical expressions (involving fractions, decimals, and exponents) using the order of operations with or without grouping symbols.</p>	<p>Student Edition: 37 <i>Check Your Understanding</i> 39 <i>Example</i> 37, 38 <i>Extra Practice</i> 673 <i>Key Concept</i> 37 <i>Mid-Chapter Quiz</i> 41 #13-#16 <i>Practice and Problem Solving</i> 39, 259 #24-#26, 267 #32-#34 <i>Practice Test</i> 73 #7, #8 <i>Real-World Example</i> 38 <i>Spiral Review</i> 46 #54-#56 <i>Study Guide and Review</i> 70 #17-#20</p> <p>Teacher Edition: A 40; AE 38; T 37; TNT 39</p>
<p>M07-S1C2-03 Moved to Grade 7</p>	

STANDARDS

PAGE REFERENCES

3. Estimation

1. Use benchmarks as meaningful points of comparison for integers and negative fractions in and out of context.*

The following page references can be used during class discussion to establish benchmarks in meeting this standard.

Student Edition:

121, 572

Example 572, 573, LA2, LA3

Practice and Problem Solving 123 #26, #27, 124 #28-#30, 579 #34-#37, 585 #26, 589 #24, #25, #33, 596 #26, 597 #28-#30, LA5 #7, #23, #24, LA6 #38, #39, #43, #44

Real-World Example 122, 573, LA3

Teacher Edition:

AE 573, LA3; EG 572a; FMC 573; T LA2; UG 572a

2. Make estimates appropriate to a given situation by
- identifying when estimation is appropriate,
 - determining the level of accuracy needed,
 - selecting the appropriate method of estimation, and
 - verifying solutions or determining the reasonableness of situations using various estimation strategies.

Student Edition:

150, 151, 184, 276

Check Your Understanding 7, 152

Concepts and Skills Bank 741-742

Concept Summary 152

Example 150, 152, 276, 277

Extra Practice 679, 681

Get Ready for the Lesson 276

Key Concept 146, 249, 401

Mid-Chapter Quiz 161 #19-#22

Mixed Problem Solving 185

Practice and Problem Solving 153

Practice Test 191 #11-#13, #25

Study Guide and Review 188 #26-#36, 190 #74, #75

Study Tip 24, 152

Test Example 151

Test Practice 154, 192 #2, #3

Writing in Math 154

Teacher Edition:

AE 151; CG 184a; UCG 150a; UG 150a

STANDARDS

PAGE REFERENCES

Strand 2: Data Analysis, Probability, and Discrete Mathematics

1. Data Analysis (Statistics)

<p>1. Solve contextual problems by constructing and utilizing a histogram or stem-and-leaf plot with appropriate labels, title, and intervals from collected data.</p>	<p>Student Edition: 92-93, LA25-LA26 <i>Check Your Understanding</i> 93, 116 #1, LA26 <i>Example</i> 93, LA25, LA26 <i>Extend</i> 119-120 <i>Extra Practice</i> 676 <i>Get Ready for the Lesson</i> 92 <i>H.O.T. Problems</i> 94 #16, #17, LA28 #17 <i>Practice and Problem Solving</i> 94, 116 #5, #8, #12, LA27 <i>Practice Test</i> 131 #5-#9 <i>Real-World Example</i> 93 <i>Spiral Review</i> 268 #57, #58 <i>Study Guide and Review</i> 128 #17-#19, 130 #31 <i>Test Practice</i> 95</p> <p>Teacher Edition: A LA28; AE 93, LA26, LA27; DI LA26; FMC LA26; O 92a</p>
<p>2. Read, interpret, and answer questions from displays of data.</p>	<p>Student Edition: 81, 88, 92, 96 <i>Check Your Understanding</i> 89, 93, 98, LA26 <i>Example</i> 88, 89, 97, LA25 <i>Extra Practice</i> 675, 676 <i>Mid-Chapter Quiz</i> 101 #3-#5 <i>Practice and Problem Solving</i> 90, 94, LA27-LA28 <i>Practice Test</i> 131 #1, #6, #8, #9 <i>Real-World Example</i> 93, 98, 99 <i>Spiral Review</i> 95 #21-#24, 100 #26, #27, 268 #57, #58 <i>Study Guide and Review</i> 128, 129 #21, #22 <i>Test Practice</i> 91, 95, 100, 132 #2, #3</p> <p>Teacher Edition: AE 89, 97; MC 81a; T 81, 96</p>

STANDARDS	PAGE REFERENCES
<p>3. Solve contextual problems by applying the following measures for a data set (extreme values, mean, median, mode, range, and frequency); state how the measures describe the data.</p>	<p>Student Edition: 102-103, 108-109 <i>Check Your Understanding</i> 104, 111 <i>Example</i> 102, 103, 108, 109 <i>Extend</i> 107 <i>Extra Practice</i> 676, 677 <i>Get Ready for the Lesson</i> 108 <i>H.O.T. Problems</i> 112 #17, #19, #20 <i>Key Concept</i> 102, 108 <i>Practice and Problem Solving</i> 104, 111 <i>Practice Test</i> 131 #4, #10, #11 <i>Real-World Example</i> 109 <i>Spiral Review</i> 586 #49 <i>Study Guide and Review</i> 129 #23-#28 <i>Study Tip</i> 103 <i>Test Example</i> 110 <i>Test Practice</i> 106, 113, 132 #1, #6 <i>Writing in Math</i> 112</p> <p>Teacher Edition: A 106; AE 103, 109, 110; FMC 103; SQ 102; T 108</p>
<p>4. Compare data by identifying trends (increasing, decreasing, remaining constant).</p>	<p>Student Edition: 82 <i>Check Your Understanding</i> 89 #1 <i>Example</i> 83, 88, 89 <i>Practice and Problem Solving</i> 90 #9 <i>Spiral Review</i> 339 #44 <i>Study Guide and Review</i> 128 #13, #15</p> <p>Teacher Edition: AE 89; TNT 90; TR 88a; UM 81a; VKL 88a</p>

STANDARDS	PAGE REFERENCES
2. Probability	
1. Use data collected from multiple trials of a single event to form a conjecture about the theoretical probability.	Student Edition: <i>Extend</i> 387 Teacher Edition: T 387 Also see <i>Math Connects: Concepts, Skills, and Problem Solving Course 2</i> © 2009 pages 486-490.
2. Determine all possible outcomes (sample space) of a given situation using a systematic approach (e.g., frequency tables, tree diagrams, charts/tables, ordered pairs, matrices).	Student Edition: 389-390 <i>Check Your Understanding</i> 391 <i>Concepts and Skills Bank</i> 757-758 <i>Example</i> 389, 390 <i>Extra Practice</i> 691 <i>Get Ready for the Next Lesson</i> 386 <i>Practice and Problem Solving</i> 391-392 <i>Practice Test</i> 411 #17 <i>Spiral Review</i> 228 #47 <i>Study Guide and Review</i> 409 #37-#42 <i>Test Practice</i> 393, 413 #12 Teacher Edition: AE 390; FMC 390; KL 389a; LR 389a; T 389
3. Use theoretical probability to predict experimental outcomes: <ul style="list-style-type: none"> • compare the outcome of the experiment to the prediction and • replicate the experiment and compare results. 	Student Edition: 381-386 (with class activities) <i>Extend</i> 387
M05-S2C2-01 Moved to Grade 5	
3. Discrete Mathematics – Systematic Listing and Counting	
1. Explore counting problems with Venn diagrams using three attributes.*	These references can be used during teacher/class discussion to meet this standard. Student Edition: <i>Reading to Solve Problems</i> 196 <i>Study Skills</i> 468E Teacher Edition: Also see <i>Math Connects: Concepts, Skills, and Problem Solving Course 2</i> © 2009 page 186a.

STANDARDS	PAGE REFERENCES
2. Build and explore tree diagrams where items repeat (e.g., all possible arrangements of the letters in the word TREE).*	<p>The following references can be expanded to meet this standard.</p> <p>Student Edition: 390 <i>Example 390</i> <i>Practice and Problem Solving 391 #8-#11</i> <i>Study Guide and Review 409 #39, #40</i></p>
M05-S2C3-01 Moved to Grade 5	
M05-S2C3-01 Moved to Grade 5	
4. Discrete Mathematics – Vertex-Edge Graphs	
1. Analyze a variety of vertex-edge graphs to determine and explain why a particular graph cannot be colored using one fewer color.*	<p>The following diagram references could be used during teacher instruction to meet this standard.</p> <p>Student Edition: 435 #28, 537 #15, 543 #22 <i>Real-World Example 446, LA12</i> <i>Test Practice 507 #33, 566 #5</i></p>
2. Investigate properties of vertex-edge graphs: <ul style="list-style-type: none"> • Hamilton path and • Hamilton circuit.* 	This standard can be met during teacher/class discussion.
M03-S2C4-02 Moved to Grade 3	
Strand 3: Patterns, Algebra, and Functions	
1. Patterns	
1. Describe, analyze, and create sequential patterns using order of operations.	<p>Student Edition: 343-348 <i>Check Your Understanding 346</i> <i>Example 344</i> <i>Extra Practice 689</i> <i>Practice and Problem Solving 346-347</i> <i>Practice Test 359 #16, #17</i> <i>Real-World Example 345</i> <i>Study Guide and Review 358 #29-#31</i> <i>Test Practice 348</i></p> <p>Teacher Edition: A 348; AE 344, 345; FMC 343, 344</p>

STANDARDS	PAGE REFERENCES
2. Functions and Relationships	
<p>1. Generalize a pattern appearing in a chart, table, or graph using words and expressions.</p>	<p>The following references can be used during teacher/class discussion to meet this standard.</p> <p>Student Edition: 341, 343 <i>Check Your Understanding</i> 324, 346 <i>Example</i> 322, 323, 344 <i>Practice and Problem Solving</i> 325-326, 346 <i>Real-World Example</i> 26, 324, 345 <i>Test Example</i> 345</p> <p>Teacher Edition: AE 26</p>
3. Algebraic Representations	
<p>1. Use algebraic symbols to represent variables in contextual situations.</p>	<p>Student Edition: 42, 50 <i>Check Your Understanding</i> 51 #5 <i>Practice and Problem Solving</i> 51 #14, #15, 52 #19-#21, #23 <i>Practice Test</i> 73 #15 <i>Real-World Example</i> 50 <i>Spiral Review</i> 60 #41, 149 #40 <i>Study Guide and Review</i> 71 #35, #36 <i>Test Practice</i> 53 #30</p> <p>Teacher Edition: AE 50; FMC 50</p> <p>Also see <i>Math Connects: Concepts, Skills, and Problem Solving Course 2</i> © 2009 pages 44, 50.</p>
<p>2. Evaluate expressions involving the four basic operations by substituting given fractions and decimals for the variable (e.g., $n + 3$, when $n = \frac{1}{2}$).</p>	<p>Student Edition: <i>Check Your Understanding</i> 158 #12, 165 #9, 170 #7-#9, 266 #10, #11, 284 #8, 288 #5, 299 #4 <i>Example</i> 158, 164, 170, 265, 283, 288, 299 <i>Practice and Problem Solving</i> 159 #27-#30, 165 #23, #24, 171 #23-#28, #34-#37, 266 #30, #31, 284 #21-#24, 285 #33-#36 <i>Spiral Review</i> 484 #51, #52</p> <p>Teacher Edition: AE 158, 164, 170, 265, 283, 288, 299</p>

STANDARDS	PAGE REFERENCES
<p>3. Solve one-step equations with one variable represented by a letter or symbol, using inverse operations with whole numbers.</p>	<p>Student Edition: 644-645, 651-652, 657-658 <i>Check Your Understanding</i> 646, 653, 658 <i>Example</i> 644, 645, 651, 652, 657, 658 <i>Explore</i> 642-643, 650 <i>Extra Practice</i> 704, 705 <i>Get Ready for the Lesson</i> 651 <i>Key Concept</i> 646, 652 <i>Mid-Chapter Quiz</i> 649 #21-#24 <i>Practice and Problem Solving</i> 647, 653, 659 <i>Practice Test</i> 557 #21-#30 <i>Real-World Example</i> 646, 652, 658 <i>Spiral Review</i> 660 #42-#45 <i>Study Guide and Review</i> 665, 666 #49-#57 <i>Study Tip</i> 658 <i>Test Practice</i> 648, 654</p> <p>Teacher Edition: A 660; AE 645, 652, 658; FMC 645; IO 651a; T 644</p>
<p>4. Translate a written phrase in and out of context to an algebraic expression or equation.</p>	<p>Student Edition: 42, 57, 350 <i>Check Your Understanding</i> 351 <i>Practice and Problem Solving</i> 39 #29, #30, 352 #12, #15, #18, #19 <i>Real-World Example</i> 350, 351, 638 <i>Start Smart</i> 9 <i>Test Practice</i> 353</p> <p>Teacher Edition: AE 350, 351</p> <p>Also see <i>Math Connects: Concepts, Skills, and Problem Solving Course 2</i> © 2009 pages 128-133.</p>
<p>4. Analysis of Change</p>	
<p>1. Determine a pattern to predict missing values on a line graph or scatter plot.*</p>	<p>The following graphing references can be used during teacher/class discussion to meet this standard.</p> <p>Student Edition: 88-90 <i>Example</i> 88</p> <p>Teacher Edition: T 88; TNT 90</p> <p>Also see <i>Math Connects: Concepts, Skills, and Problem Solving Course 2</i> © 2009 pages 426-430.</p>

STANDARDS	PAGE REFERENCES
M07-S2C1-01 Moved to Grade 7	
Strand 4: Geometry and Measurement	
1. Geometric Properties	
<p>1. Demonstrate the relationship among the diameter, radius, circumference, and definition of a circle and π.</p>	<p>Student Edition: 528-529 <i>Explore</i> 527 <i>Get Ready for the Lesson</i> 528 <i>Key Concept</i> 528, 529 <i>Reading Math</i> 529 <i>Study Tip</i> 529 Teacher Edition: CG 528a; FMC 529; TNT 527, 533</p>
<p>2. Solve problems with supplementary, complementary, and vertical angles.</p>	<p>Student Edition: 479-480 <i>Check Your Understanding</i> 481 <i>Example</i> 479, 480, 481 <i>Extra Practice</i> 696 <i>Key Concept</i> 480 <i>Mid-Chapter Quiz</i> 492 #9-#12 <i>Practice and Problem Solving</i> 482-483 <i>Practice Test</i> 515 #5, #6 <i>Spiral Review</i> 491 #39, 499 #38-#40 <i>Study Guide and Review</i> 511 <i>Test Practice</i> 484 Teacher Edition: A 484; AE 480; FMC 480; RET 479a</p>
M05-S4C1-01 Moved to Grade 5	
M05-S4C1-02 Moved to Grade 5	
M07-S4C1-02 Moved to Grade 7	
M07-S4C1-02 Moved to Grade 7	
M04-S4C1-03 Moved to Grade 4	
M05-S4C1-02 Moved to Grade 5	
M03-S4C2-01 Moved to Grade 3	

STANDARDS	PAGE REFERENCES
2. Transformation of Shapes	
<p>1. Draw a reflection of a polygon in the coordinate plane using a horizontal or vertical line of reflection (symmetry); explain why the resulting figure is symmetrical.</p>	<p>Student Edition: 610 <i>Check Your Understanding</i> 612 <i>Example</i> 610, 611 <i>Extra Practice</i> 703 <i>H.O.T. Problems</i> 614 #24 <i>Key Concept</i> 611 <i>Practice and Problem Solving</i> 612-613 <i>Practice Test</i> 625 #30, #31 <i>Spiral Review</i> 619 #31, #33, #35 <i>Study Guide and Review</i> 624 #58-#61 <i>Study Tip</i> 611 <i>Test Practice</i> 614, 627 #12 <i>Writing in Math</i> 614 Teacher Edition: A 613; AE 611; FMC 611</p>
<p>2. Recognize and identify simple single translations and reflections on a coordinate plane using all four quadrants.</p>	<p>Student Edition: 604-605, 610-611 <i>Check Your Understanding</i> 606, 612 <i>Example</i> 604, 605, 610, 611 <i>H.O.T. Problems</i> 609 #31-#34 <i>Key Concept</i> 605, 611 <i>Mixed Problem Solving</i> 716 #9, #10 <i>Practice and Problem Solving</i> 607-608, 612-613 <i>Practice Test</i> 625 #28-#31 <i>Real-World Example</i> 606 <i>Study Guide and Review</i> 623 #54-#57, 624 #58-#61 <i>Test Practice</i> 609, 614, 627 #12 <i>Writing in Math</i> 609 Teacher Edition: A 609, 613; AE 605, 606, 611; FMC 605; UG 604a</p>
M08-S4C2-03 Moved to Grade 8	

STANDARDS	PAGE REFERENCES
3. Coordinate Geometry	
<p>1. Graph ordered pairs in any quadrant of the coordinate plane.</p>	<p>Student Edition: 233, 599-600 <i>Check Your Understanding</i> 235 #5-#8, 601 #9-#11 <i>Example</i> 234, 600 <i>Extra Practice</i> 684, 702 <i>Mixed Problem Solving</i> 716 #8 <i>Practice and Problem Solving</i> 236 #21-#28, #30, #32, 601 #24-#29, 602 #34-#36 <i>Practice Test</i> 625 #20, #21 <i>Real-World Example</i> 234 <i>Spiral Review</i> 614 #31-#34, 654 #40 <i>Study Guide and Review</i> 242 #64-#67, 623 #50-#53 <i>Study Tip</i> 234</p> <p>Teacher Edition: AE 234, 235, 600; FMC 600; RCP 233a</p>
<p>2. State the missing coordinate of a given figure on the coordinate plane using geometric properties to justify the solution.</p>	<p>Student Edition: <i>Mixed Problem Solving</i> 716 #10 <i>Practice and Problem Solving</i> 236 #34</p> <p>Teacher Edition: CG 233a; DI 602</p>
4. Measurement	
<p>1. Estimate the measure of objects using a scale drawing or map.</p>	<p>The following map references can be extended to meet this standard.</p> <p>Student Edition: 435 #28-#30, 537 #15 <i>Concepts and Skills Bank</i> 747 <i>Get Ready for the Lesson</i> 233 <i>Real-World Example</i> 446</p> <p>Teacher Edition: Also see <i>Math Connects: Concepts, Skills, and Problem Solving Course 2</i> © 2009 pages 320-327.</p>

STANDARDS	PAGE REFERENCES
<p>2. Determine the appropriate unit of measure for a contextual situation and the appropriate tool to measure to the needed precision (including but not limited to length, capacity, angles, time, and mass).</p>	<p>Student Edition: <i>Check Your Understanding</i> 434 #1-#4, 439 #1-#6 <i>Example</i> 432, 437, 438 <i>Extend</i> 459-460 <i>Extra Practice</i> 693 <i>Key Concept</i> 418, 424, 425, 432, 437, 438, 450 <i>Mini Lab</i> 418 <i>Practice and Problem Solving</i> 422 #34-#41, 427 #30-#33, 434 #7-#14, 440 #10-#21 <i>Practice Test</i> 465 #16, #17, #19, #20 <i>Real-World Example</i> 419 <i>Spiral Review</i> 441 #35, #36, 449 #48, 454 #37 <i>Study Guide and Review</i> 462 #23-#27, 463 #28-#32 <i>Study Skills</i> 416E <i>Test Practice</i> 436, 441</p> <p>Teacher Edition: AE 433, 438; SQ 418; T 450; TNT 447, 454</p>
<p>3. Convert within a single measurement system:</p> <ul style="list-style-type: none"> • U.S. customary and • metric. 	<p>Student Edition: 445 <i>Check Your Understanding</i> 421 #5-#9, 426, 447 <i>Example</i> 419, 420, 425, 426, 446 <i>Extra Practice</i> 692, 693, 694 <i>H.O.T. Problems</i> 423 #46, 448 #41, 458 #27-#29 <i>Key Concept</i> 418, 424, 425, 432, 437, 438 <i>Practice and Problem Solving</i> 421 #20-#28, 422 #29-#32, 427 #11-#29, #34, #35, 447 #8-#25 <i>Practice Test</i> 465 #1-#13 <i>Real-World Example</i> 446 <i>Spiral Review</i> 429 #51, 436 #42-#45, 441 #37, 454 #34-#36, 458 #34-#36, 491 #43, 499 #41, 553 #40, #41 <i>Study Guide and Review</i> 462 #8-#11, #15-#22, 463 #36-#44 <i>Study Tip</i> 420 <i>Test Example</i> 420 <i>Test Practice</i> 429, 449, 466 #1, #5, #7 <i>Writing in Math</i> 448</p> <p>Teacher Edition: A 423, 449; AE 419, 420, 425, 426, 446; FMC 446, 456; TNT 426, 462; UT 445a; VR 418a</p>

STANDARDS	PAGE REFERENCES
4. Solve problems by determining the relationship between area and perimeter for regular and irregular polygons.	<p>The following references can be used during teacher/class discussion to meet this standard.</p> <p>Student Edition: 522-526 <i>Explore</i> 520-521</p>
5. Solve problems involving the area of simple polygons using formulas for rectangles and triangles.	<p>Student Edition: 45 #43, 534, 540 <i>Check Your Understanding</i> 65, 536, 542 <i>Concepts and Skills Bank</i> 753-754 <i>Example</i> 63, 64, 535, 540 <i>Explore</i> 61-62, 520-521, 539 <i>Extra Practice</i> 674, 698, 694 <i>Key Concept</i> 63, 64, 535, 540 <i>Mid-Chapter Quiz</i> 545 #12-#14, #16-#18 <i>Mini Lab</i> 534 <i>Practice and Problem Solving</i> 65-66, 537, 542-543 <i>Practice Test</i> 73 #19, #20, 565 #6-#9 <i>Real-World Example</i> 64, 536, 541 <i>Spiral Review</i> 85 #16, #17, 106 #31, 260 #43, 279 #47, 544 #30, 553 #37 <i>Study Guide and Review</i> 72 #47, #48, 563 <i>Test Practice</i> 67, 74 #7, #12, 538, 544, 567 #11</p> <p>Teacher Edition: AE 64, 535, 536, 541; TNT 64, 543; UM 534a</p>
6. Describe the relationship between the volume of a figure and the area of its base.*	<p>The following references can be extended to meet this standard.</p> <p>Student Edition: 548-549 <i>Example</i> 549 <i>Mini Lab</i> 548</p> <p>Teacher Edition: FMC 549</p> <p>Also see <i>Math Connects: Concepts, Skills, and Problem Solving Course 2</i> © 2009 pages 613-618.</p>
MO5-S4C4-02 Moved to Grade 5	
MO5-S4C4-04 Moved to Grade 7	

STANDARDS	PAGE REFERENCES
Strand 5: Structure and Logic	
1. Algorithms and Algorithmic Thinking	
<p>1. Analyze algorithms for computing with fractions.</p>	<p>The following fraction references can be analyzed during class discussion to meet this standard.</p> <p>Student Edition: 204, 210, 263, 283, 293 <i>Explore</i> 261-262, 280-281, 291-292 <i>Key Concept</i> 257, 263, 282, 293 <i>Writing in Math</i> 208, 260</p> <p>Teacher Edition: FMC 205, 210, 264, 294; UM 263a, 282a</p>
<p>2. Create and justify an algorithm to determine the area of a given compound figure using parallelograms and triangles.*</p>	<p>The concepts in the following page references can be extended to meet this standard.</p> <p>Student Edition: 543 #19, #20 <i>Concepts and Skills Bank</i> 753-754</p>
M05-S5C1-01 Moved to Grade 5	
2. Logic, Reasoning, Arguments, and Mathematical Proof	
<p>1. Develop the problem-solving strategy of working backwards.*</p>	<p>Student Edition: 592 <i>Extra Practice</i> 701 <i>Mixed Problem Solving</i> 593 #3-#5, #7 <i>Spiral Review</i> 598 #39 <i>Study Guide and Review</i> 622 #37, #38 <i>Writing in Math</i> 592</p> <p>Teacher Edition: AE 592; F 592; T 592</p>
<p>2. Solve a non-routine problem by selecting and using a strategy.*</p>	<p>Student Edition: 54, 79, 214, 254, 341, 399, 500, 546, 592, 661 <i>Mixed Problem Solving</i> 55, 79, 185, 215, 255, 342, 400, 501, 547, 593, 662, 706-717</p>

STANDARDS	PAGE REFERENCES
<p>3. Solve simple logic problems, including conditional statements, and justify solution methods and reasoning.</p>	<p>Student Edition: <i>H.O.T. Problems</i> 31 #45, #46, 35 #41, 59 #33, 60 #35, 105 #22, 112 #19, #20, 118 #15, 124 #32, 145 #34, 160 #42, 172 #48, 182 #39, #41, 200 #32-#36, 228 #37, 268 #47, #48, 285 #42-#44, 338 #33, 441 #31, 498 #27-#30, 525 #23, 533 #36, 538 #22, 551 #23, 552 #32, 558 #26, 580 #48, #49, 590 #36-#39, 597 #35</p>