



Math Connects

Concepts, Skills, and Problem Solving

Course 2

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STANDARDS	PAGE REFERENCES
NUMBER AND OPERATIONS	
Multiply and divide fractions	
<p>N.MR.06.01 Understand division of fractions as the inverse of multiplication, e.g., if $4/5 \div 2/3 =$, then $2/3 \cdot$ = $4/5$, so = $4/5 \cdot 3/2 = 12/10$.</p>	<p>Student Edition: 265-270 <i>Study Guide and Review</i> 274 <i>Practice Test</i> 275 #25 <i>Test Practice</i> 276 #6 Teacher Wraparound Edition: EA 270; SC 265</p>
<p>N.FL.06.02 Given an applied situation involving dividing fractions, write a mathematical statement to represent the situation.</p>	<p>Student Edition: 265-270 <i>Study Guide and Review</i> 274 <i>Practice Test</i> 275 #21-#25 <i>Test Practice</i> 277 #13 Teacher Wraparound Edition: 365b A 270; AE 267</p>

STANDARDS	PAGE REFERENCES
<p>N.MR.06.03 Solve for the unknown in equations such as $\frac{1}{4} \div \quad = 1$, $\frac{3}{4} \div \quad = \frac{1}{4}$, and $\frac{1}{2} = 1 \cdot \quad$.</p>	<p>Student Edition: 258-263 <i>Study Guide and Review</i> 274 <i>Practice Test</i> 275 #21-#25</p> <p>Teacher Wraparound Edition: 258b AE 259-260; FMC 259; PAA 262</p>
<p>N.FL.06.04 Multiply and divide any two fractions, including mixed numbers, fluently.</p>	<p>Student Edition: 252-257, 258-263, 265-270 <i>Study Guide and Review</i> 274 <i>Practice Test</i> 275</p> <p>Teacher Wraparound Edition: 252b, 265b AE 253-254; DI 252; FMC 253; PAA 257; SC 252</p>
<p>Represent rational numbers as fractions or decimals</p>	
<p>N.ME.06.05 Order rational numbers and place them on the number line.</p>	<p>Student Edition: 215-220 <i>Mini-Lab</i> 215 <i>Study Guide and Review</i> 224 <i>Practice Test</i> 225</p> <p>Teacher Wraparound Edition: AE 217; DI 219</p>
<p>N.ME.06.06 Represent rational numbers as fractions or terminating decimals when possible, and translate between these representations.</p>	<p>Student Edition: 196-200, 205 #47-#50, 210 #60 <i>Mid-Chapter Quiz</i> 201 <i>Study Guide and Review</i> 223 <i>Practice Test</i> 225</p> <p>Teacher Wraparound Edition: AE 197; FMC 197; SC 196; TNT 197, 199</p>
<p>N.ME.06.07 Understand that a fraction or a negative fraction is a quotient of two integers, e.g., $-\frac{8}{3}$ is -8 divided by 3.</p>	<p>Student Edition: 196-200, 210 #60, 216-217 <i>Mid-Chapter Quiz</i> 201 <i>Study Guide and Review</i> 223 <i>Practice Test</i> 225</p> <p>Teacher Wraparound Edition: AE 197-198; PAA 200</p>

STANDARDS	PAGE REFERENCES
Add and subtract integers and rational numbers	
<p>N.MR.06.08 <i>Understand integer subtraction as the inverse of integer addition. Understand integer division as the inverse of integer multiplication.*</i></p>	<p>Student Edition: 103-106, 114-118 <i>Algebra Lab</i> 101-102</p> <p>Teacher Wraparound Edition: EA 106; FMC 115; SC 103; T 103</p>
<p>N.FL.06.09 <i>Add and multiply integers between -10 and 10; subtract and divide integers using the related facts. Use the number line and chip models for addition and subtraction.*</i></p>	<p>Student Edition: 95-99, 103-106, 107-111, 114-118 <i>Algebra Lab</i> 93-94, 101-102 <i>Mid-Chapter Quiz</i> 100 <i>Study Guide and Review</i> 121-122 <i>Practice Test</i> 123</p> <p>Teacher Wraparound Edition: AE 104; DI 98, 117; EA 99, 106; FMC 96, 115; SC 95; TNT 97, 104, 110</p>
<p>N.FL.06.10 Add, subtract, multiply and divide positive rational numbers fluently.</p>	<p>Student Edition: 236-241, 242-246, 252-257, 265-270, 297 #21-#24, 303 #53-#56, 378 #34-#36, 382 #31-#33 <i>Mid-Chapter Quiz</i> 247 <i>Math Lab</i> 250-251 <i>Study Guide and Review</i> 272-274 <i>Practice Test</i> 275</p> <p>Teacher Wraparound Edition: A 246, 257, 270; AE 237-238, 244, 253-254, 266-267; DI 252, 269; EA 240; FMC 243; SC 236</p>
Find equivalent ratios	
<p>N.ME.06.11 Find equivalent ratios by scaling up or scaling down.</p>	<p>Student Edition: 282-286, 297 #18-#20, 320-326 <i>Study Guide and Review</i> 334 <i>Practice Test</i> 337</p> <p>Teacher Wraparound Edition: A 286, 326; EA 286; FMC 283, 322; PAA 325; SC 282, 320; TNT 283, 322</p>

STANDARDS	PAGE REFERENCES
Solve decimal, percentage and rational number problems	
<p>N.FL.06.12 Calculate part of a number given the percentage and the number.</p>	<p>Student Edition: 344-348, 354 #35-#36, 360 #55-#58, 361-365, 374 #42-#43 <i>Math Lab</i> 342-343 <i>Mid-Chapter Quiz</i> 368 <i>Study Guide and Review</i> 385 #11-#14, 386 <i>Practice Test</i> 389</p> <p>Teacher Wraparound Edition: A 348, 365; AE 345, 362; FMC 345, 362; TNT 342</p>
<p>N.MR.06.13 Solve contextual problems involving percentages such as sales taxes and tips.*</p>	<p>Student Edition: 344-348, 350-354, 355-360, 361-365, 369-374, 375-378, 379-382 <i>Reading to Solve Problems</i> 349 <i>Mid-Chapter Quiz</i> 368 <i>Spreadsheet Lab</i> 383 <i>Study Guide and Review</i> 384-388 <i>Practice Test</i> 389</p> <p>Teacher Wraparound Edition: A 348, 378, 382; AE 345, 352, 363, 376, 380</p>
<p>N.FL.06.14 For applied situations, estimate the answers to calculations involving operations with rational numbers.</p>	<p>Student Edition: 230-235, 241 #52-#55, 246 #43-#46, 735 <i>Mid-Chapter Quiz</i> 247 #1-#8 <i>Study Guide and Review</i> 272</p> <p>Teacher Wraparound Edition: 230b AE 231-232; FMC 231; SC 230; TNT 230, 231</p>
<p>N.FL.06.15 Solve applied problems that use the four operations with appropriate decimal numbers.</p>	<p>Student Edition: 28 #5, 43 #11, 47 #42-#43, 141 #54-#57, 205 #54-#57, 229 #5-#10, 303 #53-#56, 736-738</p> <p>Teacher Wraparound Edition: PAA 200</p>

STANDARDS	PAGE REFERENCES
Use exponents	
<p>N.ME.06.16 <i>Understand and use integer exponents, excluding powers of negative bases; express numbers in scientific notation.*</i></p>	<p>Student Edition: 30-33, 37 #42-#45, 38-41, 61 #44, LA2-LA5 <i>Study Guide and Review</i> 71 <i>Practice Test</i> 75</p> <p>Teacher Wraparound Edition: 30b A LA5; AE 31, 39, LA3; DI LA4; FMC 31, LA3; PAA 33; SC LA2</p>
Understand rational numbers and their location on the number line	
<p>N.ME.06.17 Locate negative rational numbers (including integers) on the number line; know that numbers and their negatives add to 0, and are on opposite sides and at equal distance from 0 on a number line.</p>	<p>Student Edition: 80-83, 87 #41-#44, 96 <i>Algebra Lab</i> 93-94</p> <p>Teacher Wraparound Edition: AE 81; FMC 81; SC 80</p>
<p>N.ME.06.18 Understand that rational numbers are quotients of integers (non zero denominators), e.g., a rational number is either a fraction or a negative fraction.</p>	<p>Student Edition: 196-200, 210 #60, 215-217 <i>Mid-Chapter Quiz</i> 201 #19-#21 <i>Study Guide and Review</i> 223 <i>Practice Test</i> 225 #6-#7</p> <p>Teacher Wraparound Edition: AE 197; PAA 200</p>
<p>N.ME.06.19 Understand that 0 is an integer that is neither negative nor positive.</p>	<p>Student Edition: 80, 83 #37</p>
<p>N.ME.06.20 Know that the absolute value of a number is the value of the number ignoring the sign; or is the distance of the number from 0.</p>	<p>Student Edition: 80-83, 92 #56, 96-99 <i>Mid-Chapter Quiz</i> 100 #6-#9 <i>Study Guide and Review</i> 120 <i>Practice Test</i> 123 #2-#3</p> <p>Teacher Wraparound Edition: 80b AE 81; DI 98; EA 99; TNT 97</p>

STANDARDS	PAGE REFERENCES
Calculate rates	
<p>A.PA.06.01 Solve applied problems involving rates, including speed, e.g., if a car is going 50 mph, how far will it go in $3\frac{1}{2}$ hours?</p>	<p>Student Edition: 144-146, 287-292, 293-297 <i>Mid-Chapter Quiz</i> 147 #19-#20</p> <p>Teacher Wraparound Edition: 287b A 146; AE 288-289; FMC 143, 288, 294; SC 287, 293; TNT 288</p>
Understand the coordinate plane	
<p>A.RP.06.02 Plot ordered pairs of integers and use ordered pairs of integers to identify points in all four quadrants of the coordinate plane.</p>	<p>Student Edition: 88-92, 99 #47-#50, 106 #54 <i>Mid-Chapter Quiz</i> 100 <i>Study Guide and Review</i> 121 <i>Practice Test</i> 123</p> <p>Teacher Wraparound Edition: AE 89-90; FMC 89; SC 88; TNT 90</p>
Use variables, write expressions and equations, and combine like terms	
<p>A.FO.06.03 Use letters, with units, to represent quantities in a variety of contexts, e.g., y lbs., k minutes, x cookies.</p>	<p>Student Edition: 44-47, 49-52, 56 #47, 60 #18-#19, 63-67 <i>Mid-Chapter Quiz</i> 48 #20</p> <p>Teacher Wraparound Edition: A 47; AE 45, 64; FMC 45</p>
<p>A.FO.06.04 Distinguish between an algebraic expression and an equation.</p>	<p>Student Edition: 44-47, 49-52, 128-133</p> <p>Teacher Wraparound Edition: A 52; AE 45; DI 50; FMC 45, 50, 129</p>
<p>A.FO.06.05 Use standard conventions for writing algebraic expressions, e.g., $2x + 1$ means “two times x, plus 1” and $2(x + 1)$ means “two times the quantity (x + 1).”</p>	<p>Student Edition: 44-47, 53-56</p> <p>Teacher Wraparound Edition: AE 53; FMC 45; TNT 44-53</p>
<p>A.FO.06.06 Represent information given in words using algebraic expressions and equations.</p>	<p>Student Edition: 44-47, 128-133, 141 #51 <i>Mid-Chapter Quiz</i> 48 #15, 147 #1-#4</p> <p>Teacher Wraparound Edition: 128b A 133; AE 129; EA 132; FMC 129; SC 128; TNT 44, 129</p>

STANDARDS	PAGE REFERENCES
<p>A.FO.06.07 Simplify expressions of the first degree by combining like terms, and evaluate using specific values.</p>	<p>Student Edition: 44-47, 52 #36, 56 #47, 61 #45-#47, 742 <i>Mid-Chapter Quiz</i> 48 #16-#20 <i>Study Guide and Review</i> 73 <i>Practice Test</i> 75 #9-#12 Teacher Wraparound Edition: 44b AE 45</p>
<p>Represent linear functions using tables, equations, and graphs</p>	
<p>A.RP.06.08 Understand that relationships between quantities can be suggested by graphs and tables.</p>	<p>Student Edition: 63-67, 163-167 <i>Graphing Calculator Lab</i> 68-69, 168 <i>Study Guide and Review</i> 74, 172 Teacher Wraparound Edition: A 167; AE 63-64, 164-165; FMC 64, 164; SC 163</p>
<p>A.PA.06.09 Solve problems involving linear functions whose input values are integers; write the equation; graph the resulting ordered pairs of integers, e.g., given c chairs, the “leg function” is $4c$; if you have 5 chairs, how many legs?; if you have 12 legs, how many chairs?*</p>	<p>Student Edition: 163-167 <i>Graphing Calculator Lab</i> 168 <i>Study Guide and Review</i> 172 Teacher Wraparound Edition: A 167; AE 164-167; FMC 163, 164; SC 163; TNT 166</p>
<p>A.RP.06.10 Represent simple relationships between quantities using verbal descriptions, formulas or equations, tables, and graphs, e.g., perimeter-side relationship for a square, distance-time graphs, and conversions such as feet to inches.</p>	<p>Student Edition: 159 #25-#26, 161 #43-#44, 163-167 <i>Measurement Lab</i> 162 <i>Graphing Calculator Lab</i> 168 <i>Practice Lab</i> 173 #25 <i>Test Practice</i> 175 #6 Teacher Wraparound Edition: A 167</p>

STANDARDS	PAGE REFERENCES
Solve equations	
<p>A.FO.06.11 <i>Relate simple linear equations with integer coefficients, e.g., $3x = 8$ or $x + 5 = 10$, to particular contexts and solve.*</i></p>	<p>Student Edition: 49-52, 56 #45-#46, 61 #41-#43, 136-141, 142-146, 155 #39-#42 <i>Study Guide and Review</i> 73, 170-171 <i>Practice Test</i> 75, 173 <i>Algebra Lab</i> 134-135 <i>Mid-Chapter Quiz</i> 147 Teacher Wraparound Edition: A 52; AE 50, 137, 143-144; DI 50</p>
<p>A.FO.06.12 Understand that adding or subtracting the same number to both sides of an equation creates a new equation that has the same solution.</p>	<p>Student Edition: 136-141, 155 #41-#42 <i>Algebra Lab</i> 134-135 <i>Mid-Chapter Quiz</i> 147 <i>Study Guide and Review</i> 170 <i>Practice Test</i> 173 Teacher Wraparound Edition: 136b AE 137-138; FMC 137; PAA 138; SC 136; TNT 136</p>
<p>A.FO.06.13 Understand that multiplying or dividing both sides of an equation by the same non-zero number creates a new equation that has the same solutions.</p>	<p>Student Edition: 142-146, 155 #39-#40 <i>Mid-Chapter Quiz</i> 147 <i>Study Guide and Review</i> 171 <i>Practice Test</i> 173 Teacher Wraparound Edition: 142b A 146; AE 143-144; SC 142; TNT 143</p>
<p>A.FO.06.14 Solve equations of the form $ax + b = c$, e.g., $3x + 8 = 15$ by hand for positive integer coefficients less than 20, use calculators otherwise, and interpret the results.</p>	<p>Student Edition: 151-155, 161 #45-#48, 167 #27-#30 <i>Study Guide and Review</i> 171 <i>Practice Test</i> 173 Teacher Wraparound Edition: 151b AE 152-153; DI 155; SC 151; TNT 151, 152</p>

STANDARDS	PAGE REFERENCES
MEASUREMENT	
Convert within measurement systems	
<p>M.UN.06.01 Convert between basic units of measurement within a single measurement system, e.g., square inches to square feet.</p>	<p>Student Edition: 298-303, 304-309, 315 #52-#54 <i>Mid-Chapter Quiz</i> 317 #9-#17 <i>Study Guide and Review</i> 335</p> <p>Teacher Wraparound Edition: 298b, 304b A 303, 309; AE 299-300, 305-307; FMC 299, 305; SC 298; TNT 304, 305</p>
Find volume and surface area	
<p>M.PS.06.02 Draw patterns (of faces) for a cube and rectangular prism that, when cut, will cover the solid exactly (nets).</p>	<p>Student Edition: 603-606 <i>Measurement Lab</i> 600-601</p> <p>Teacher Wraparound Edition: 603b FMC 604; SC 603; TNT 601</p>
<p>M.TE.06.03 Compute the volume and surface area of cubes and rectangular prisms given the lengths of their sides, using formulas.</p>	<p>Student Edition: 613-618, 623 #37, 649-653 <i>Study Guide and Review</i> 630 #38-#41, 662 <i>Practice Test</i> 631, 663</p> <p>Teacher Wraparound Edition: 613b, 649b AE 650-651; FMC 650; PAA 618, 653; SC 613, 649</p>

STANDARDS	PAGE REFERENCES
GEOMETRY	
Understand and apply basic properties	
<p>G.GS.06.01 Understand and apply basic properties of lines, angles, and triangles, including:</p> <ul style="list-style-type: none"> • triangle inequality • relationships of vertical angles, complementary angles, supplementary angles • congruence of corresponding and alternate interior angles when parallel lines are cut by a transversal, and that such congruencies imply parallel lines • locate interior and exterior angles of any triangle, and use the property that an exterior angle of a triangle is equal to the sum of the remote (opposite) interior angles • know that the sum of the exterior angles of a convex polygon is 360°. 	<p>Student Edition: 510-513, 514-517, 524-529, 547-551, LA10-LA13 <i>Mid-Chapter Quiz</i> 539</p> <p>Teacher Wraparound Edition: 514b A 513, 517, 551, LA13; AE 512, 515, 525-526; DI LA12; FMC 511, 515, 525; PAA 513, 529; SC 510, 514</p>
Understand the concept of congruence and basic transformations	
<p>G.GS.06.02 Understand that for polygons, congruence means corresponding sides and angles have equal measures.</p>	<p>Student Edition: 554, LA14-LA17</p> <p>Teacher Wraparound Edition: A LA17; AE LA15; FMC 554; SC LA14</p>
<p>G.TR.06.03 Understand the basic rigid motions in the plane (reflections, rotations, translations), relate these to congruence, and apply them to solve problems.</p>	<p>Student Edition: 553-557, 558-562, 743-744 <i>Study Guide and Review</i> 566 <i>Practice Test</i> 567 #15</p> <p>Teacher Wraparound Edition: 553b, 558b AE 554-555, 559; FMC 554; PAA 556; SC 553, 558; TNT 561</p>
<p>G.TR.06.04 Understand and use simple compositions of basic rigid transformations, e.g., a translation followed by a reflection.</p>	<p>Student Edition: 561 #30, #31, 562 #37</p> <p>Teacher Wraparound Edition: TNT 561</p>

STANDARDS	PAGE REFERENCES
Understand the concept of congruence and basic transformations	
<p>G.SR.06.05 Use paper folding to perform basic geometric constructions of perpendicular lines, midpoints of line segments and angle bisectors; justify informally.</p>	<p>The following pages can be used to meet this standard.</p> <p>Student Edition: 558</p> <p>Teacher Wraparound Edition: AE 559</p> <p>Additional Examples are also in: Noteables™ Interactive Study Notebook with Foldables™</p>
DATA AND PROBABILITY	
Understand the concept of probability and solve problems	
<p>D.PR.06.01 Express probabilities as fractions, decimals, or percentages between 0 and 1; know that 0 probability means an event will not occur and that probability 1 means an event will occur.</p>	<p>Student Edition: 460-464, 465-470, 474 #23-#24, 478 #22, 486-490, 492-497</p> <p><i>Mid-Chapter Quiz</i> 479</p> <p><i>Probability Lab</i> 491</p> <p><i>Study Guide and Review</i> 498-502</p> <p><i>Practice Test</i> 503</p> <p>Teacher Wraparound Edition: 460b</p> <p>A 464, 497; AE 461-462, 466-467; DI 464; FMC 461; SC 460, 465</p>
<p>D.PR.06.02 Compute probabilities of events from simple experiments with equally likely outcomes, e.g., tossing dice, flipping coins, spinning spinners, by listing all possibilities and finding the fraction that meets given conditions.</p>	<p>Student Edition: 460-464, 465-470, 474 #23-#24, 478 #22, 486-490, 492-497</p> <p><i>Mid-Chapter Quiz</i> 479</p> <p><i>Probability Lab</i> 491</p> <p><i>Study Guide and Review</i> 498-502</p> <p><i>Practice Test</i> 503</p> <p>Teacher Wraparound Edition: 460b, 465b, 471b, 475b, 486b</p> <p>A 464, 497; AE 461-462, 466-467, 487-488; DI 464; FMC 461; SC 460, 465</p>

* revised expectations in italics