



Math Connects

Concepts, Skills, and Problem Solving

Course 1

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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: 293-297, 298-301 <i>Math Lab</i> 291-292 <i>Study Guide and Review</i> 306 #60-#66 <i>Practice Test</i> 307 #22-#25 Teacher Wraparound Edition: A 297, 301; AE 294, 299; FMC 299; SQ 293, 298</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: 293-297, 298-301 <i>Study Guide and Review</i> 306 #60-#66 <i>Practice Test</i> 307 #22-#25 <i>Test Practice</i> 308 #3 Teacher Wraparound Edition: AE 294 #5, 299 #3; PAA 297; SQ 293, 298; UA 301</p>
<p>N.MR.06.03 Solve for the unknown in equations such as $1/4 \div$ = 1, $3/4 \div$ = $1/4$, and $1/2 = 1 \cdot$.</p>	<p>Student Edition: 659 #22-#30, 660 #38 Teacher Wraparound Edition: AE 658</p>

STANDARDS	PAGE REFERENCES
<p>N.FL.06.04 Multiply and divide any two fractions, including mixed numbers, fluently.</p>	<p>Student Edition: 282-286, 287-290, 293-297, 298-301, 319 #34-#37, 327 #25-#27 <i>Math Lab</i> 280-281, 291-292 <i>Study Guide and Review</i> 306 <i>Practice Test</i> 307 #18-#25</p> <p>Teacher Wraparound Edition: 282b, 287b, 293b, 298b A 286, 290, 297, 301; AE 283, 288, 294, 299; SQ 282, 287, 293, 298</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: 121-125, 141 #47-#52, 142-145, 219 #34-#36, 220-224, 572-575 <i>Study Guide and Review</i> 241 #41-#42, 621 #11-#15 <i>Practice Test</i> 243 #16, 625 #1-#4 <i>Test Practice</i> 244 #4</p> <p>Teacher Wraparound Edition: A 125, 145; AE 122; DI 123; SQ 121</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: 138-141, 225-228, 229-232, 237 #41-#43, 253 #45-#49 <i>Study Guide and Review</i> 241-242 <i>Practice Test</i> 243 #17-#20</p> <p>Teacher Wraparound Edition: 225b, 229b A 228, 232; AE 226, 230; DI 227; FMC 230; SQ 229</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: 230-232, 253 #45-#48 <i>Study Guide and Review</i> 242 #53-#59 <i>Practice Test</i> 243 #17</p> <p>Teacher Wraparound Edition: 229b A 232; AE 230</p>

STANDARDS

PAGE REFERENCES

Add and subtract integers and rational numbers

N.MR.06.08 *Understand integer subtraction as the inverse of integer addition. Understand integer division as the inverse of integer multiplication.**

Student Edition:

582-586, 590 #44-#47, 594-598, 629 #8-#10
 Mid-Chapter Quiz 591 #13-#18
 Study Guide and Review 620-622
 Practice Test 625

Teacher Wraparound Edition:

582b, 594b
 A 586, 598; AE 583-584, 595; FMC 583, 595;
 SQ 582, 594

N.FL.06.09 *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.**

Student Edition:

577-581, 582-586, 587-590, 594-598, 603 #47-#52,
 #56-#59, 609 #42, 629 #6-#15
 Algebra Lab 576
 Mid-Chapter Quiz 591
 Study Guide and Review 620-622
 Practice Test 625 #1-#19

Teacher Wraparound Edition:

577b, 582b, 587b, 594b
 A 586, 590; AE 578, 583-584, 588, 595; FMC 578,
 583, 588, 595; SQ 577, 582, 587, 594

N.FL.06.10 Add, subtract, multiply and divide positive rational numbers fluently.

Student Edition:

156-160, 163-166, 169-172, 173-176, 179-183,
 256-260, 263-268, 270-274, 282-286, 287-290,
 293-297, 298-301
 Math Lab 155, 162, 167, 177, 261, 280, 291
 Mid-Chapter Quiz 161 #23-#25, 275 #8-#20
 Study Guide and Review 188-190, 302-306
 Practice Test 191 #14-#25, 307
 Reading to Solve Problems 269

Teacher Wraparound Edition:

156b, 163b, 169b, 173b, 179b, 256b, 263b, 270b,
 282b, 287b, 293b, 298b
 A 160, 172, 176, 183, 260, 286; AE 157, 164, 174,
 180, 258, 265, 283; FMC 170, 174, 180, 271;
 SQ 156, 163, 169, 173, 256, 263, 282

STANDARDS	PAGE REFERENCES
Find equivalent ratios	
<p>N.ME.06.11 Find equivalent ratios by scaling up or scaling down.</p>	<p>Student Edition: 314-319, 322-327, 329-333, 339 #39-#41 <i>Graphing Calculator Lab</i> 328 <i>Mid-Chapter Quiz</i> 340 #6-#17 <i>Study Guide and Review</i> 356-357</p> <p>Teacher Wraparound Edition: 322b A 319; AE 323-324; EA 318; FMC 323; SQ 329</p>
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: 401-405 <i>Study Guide and Review</i> 410 #47-#55 <i>Practice Test</i> 411 #22-#25</p> <p>Teacher Wraparound Edition: A 405; AE 402-403; SQ 401</p>
<p>N.MR.06.13 Solve contextual problems involving percentages such as sales taxes and tips.*</p>	<p>Student Edition: 365 (percent defined) <i>Real-World Example 3</i> 366 <i>Check Your Understanding</i> 367 <i>Practice and Problem Solving</i> 368-369</p>
<p>N.FL.06.14 For applied situations, estimate the answers to calculations involving operations with rational numbers.</p>	<p>Student Edition: 150-154, 160 #47-#50, 249-253, 276-279 <i>Mid-Chapter Quiz</i> 161 #18-#22, 275 #1-#5 <i>Study Guide and Review</i> 188 #26-#36, 303, 305 <i>Practice Test</i> 191 #11-#13, 307 #14-#17</p> <p>Teacher Wraparound Edition: 150b, 249b, 276b A 154, 253, 279; AE 151, 250-251, 277; DI 251; FMC 277; SQ 150, 249, 276</p>

STANDARDS	PAGE REFERENCES
<p>N.FL.06.15 Solve applied problems that use the four operations with appropriate decimal numbers.</p>	<p>Student Edition: 156-160, 163-166, 169-172, 173-176, 179-183 <i>Math Lab</i> 155, 162, 167-168, 177-178 <i>Mid-Chapter Quiz</i> 161 <i>Study Guide and Review</i> 188-190 <i>Practice Test</i> 191 #14-#25</p> <p>Teacher Wraparound Edition: 156b, 163b, 169b, 173b, 179b A 160, 166, 172, 174, 183; AE 157, 164, 170, 174, 180; FMC 174; SQ 156, 163, 169, 173, 179</p>
<p>Use exponents</p>	
<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: 32-36, 40 #35, 46 #57, 53 #35 <i>Mid-Chapter Quiz</i> 41 #7-#12 <i>Study Guide and Review</i> 69 #14-#16 <i>Extra Practice</i> 672</p> <p>Teacher Wraparound Edition: 32b A 36; AE 33-34; DI 34; SQ 32</p>
<p>Understand rational numbers and their location on the number line</p>	
<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: 121-125, 572-575, LA2-LA6 <i>Study Guide and Review</i> 130 #33-#38, 621 <i>Algebra Lab</i> 576</p> <p>Teacher Wraparound Edition: 121b A 125, 575; AE 122, 573, LA3; DI 123; FMC 122; SQ 121, 572, LA2</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: 225-228, 229-232, LA2-LA6 <i>Study Guide and Review</i> 241-242</p> <p>Teacher Wraparound Edition: 229b A 232; AE 226, 230; FMC LA3</p>
<p>N.ME.06.19 Understand that 0 is an integer that is neither negative nor positive.</p>	<p>Student Edition: 121 <i>Algebra Lab</i> 576</p>

STANDARDS	PAGE REFERENCES
<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: LA4 Teacher Wraparound Edition: FMC 578, 583</p>
<p>ALGEBRA</p>	
<p>Calculate rates</p>	
<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: 315-319 <i>Study Guide and Review</i> 356 <i>Practice Test</i> 359 #4-#10 Teacher Wraparound Edition: A 319; AE 315-316</p>
<p>Understand the coordinate plane</p>	
<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: 233-237, 599-603, 609 #38-#41, 614 #31-#34 <i>Test Practice</i> 73 #9-#20 <i>Study Guide and Review</i> 242, 623 <i>Practice Test</i> 243 #21-#25, 625 #20-#25 Teacher Wraparound Edition: 233b, 599b A 237; AE 234-235, 600; FMC 600; PAA 603; SQ 599</p>
<p>Use variables, write expressions and equations, and combine like terms</p>	
<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: 42-46, 53 #30, #34, 57-60, 63-67 <i>Algebra Lab</i> 61-62 <i>Study Guide and Review</i> 70-72 <i>Practice Test</i> 73 #9-#20 Teacher Wraparound Edition: AE 43; FMC 43; SQ 42</p>
<p>A.FO.06.04 Distinguish between an algebraic expression and an equation.</p>	<p>Student Edition: 42-46, 57-60 Teacher Wraparound Edition: FMC 43; SQ 57</p>

STANDARDS	PAGE REFERENCES
<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: 9, 42-46, 53 #34, 632-635 <i>Algebra Lab</i> 630-631</p> <p>Teacher Wraparound Edition: A 635; AE 633; C 632; SQ 42</p>
<p>A.FO.06.06 Represent information given in words using algebraic expressions and equations.</p>	<p>Student Edition: 9, 42-46, 49-53, 57-60, 632-635, 636-641, 644-648, 651-654, 657-660 <i>Algebra Lab</i> 61-62 <i>Study Guide and Review</i> 70 #29, 71 #35-#36, 664-666 <i>Practice Test</i> 73 #15-#16, #20, 667 <i>Mid-Chapter Quiz</i> 649</p> <p>Teacher Wraparound Edition: AE 43, 638, 646, 652, 658; SQ 42, 49, 57, 657</p>
<p>A.FO.06.07 Simplify expressions of the first degree by combining like terms, and evaluate using specific values.</p>	<p>Student Edition: 42-46, 53 #31-#33, 60 #42-#44, 343-348, 636-641, 648 #36, 654 #39 <i>Study Guide and Review</i> 70-72, 664 #18-#28 <i>Practice Test</i> 73 #9-#11, #19-#20, 359 #17 <i>Mid-Chapter Quiz</i> 649 #11-#19</p> <p>Teacher Wraparound Edition: A 46; AE 43, 344-345; 637; FMC 344</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: 49-53, 60 #41, 67 #36-#37, 343-348, 349-353 <i>Graphing Calculator Lab</i> 47-48 <i>Study Guide and Review</i> 71, 358 <i>Practice Test</i> 73 #13-#14</p> <p>Teacher Wraparound Edition: AE 50, 344-345, 350-351; DI 51; SQ 49</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: 49-53, 60 #41, 67 #36-#37, 349-353 <i>Graphing Calculator Lab</i> 47-48, 354 <i>Study Guide and Review</i> 71, 358 <i>Practice Test</i> 73 #13-#14</p> <p>Teacher Wraparound Edition: AE 50, 350-351; FMC 350; SQ 49</p>

STANDARDS	PAGE REFERENCES
<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: 57-60, 63-67 <i>Algebra Lab</i> 61 <i>Study Guide and Review</i> 72 <i>Problem-Solving Investigation</i> 78-79</p> <p>Teacher Wraparound Edition: AE 58, 64; SQ 57, 63</p>
<p>Solve equations</p>	
<p>A.FO.06.11 Relate simple linear equations with integer coefficients, e.g., $3x = 8$ or $x + 5 = 10$, to particular contexts and solve.*</p>	<p>Student Edition: 57-60, 67 #33-#35, 644-648, 651-654, 657-660 <i>Study Guide and Review</i> 72, 665-666 <i>Algebra Lab</i> 642-643, 650 <i>Mid-Chapter Quiz</i> 649 #20-#25</p> <p>Teacher Wraparound Edition: A 60, 660; AE 58, 645-646, 652, 658; PAA 652; SQ 57, 644, 651</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: 644-648, 651-654 <i>Algebra Lab</i> 642, 650 <i>Mid-Chapter Quiz</i> 649 #21-#25 <i>Study Guide and Review</i> 665 <i>Practice Test</i> 667 #21-#32</p> <p>Teacher Wraparound Edition: 644b, 651b AE 645-646, 652; FMC 645, 652; SQ 644, 651</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: 657-660 <i>Study Guide and Review</i> 666 <i>Extra Practice</i> 705</p> <p>Teacher Wraparound Edition: A 660; AE 658</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: LA7-LA9</p> <p>Teacher Wraparound Edition: AE LA8; FMC LA8; SQ LA7</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: 418-423, 424-429, 436 #42-#45, 445-449, 454 #34-#36 <i>Measurement Lab</i> 430-431 <i>Mid-Chapter Quiz</i> 444 #1-#12 <i>Study Guide and Review</i> 462-463 <i>Practice Test</i> 465 #1-#13</p> <p>Teacher Wraparound Edition: 418b, 424b, 445b A 423, 449; AE 419-420, 425-426, 446; SQ 445</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: 555-559 <i>Geometry Lab</i> 554 <i>Study Guide and Review</i> 564 #35-#37 <i>Practice Test</i> 565 #14-#16</p> <p>Teacher Wraparound Edition: A 559; AE 556; FMC 556</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: 548-553, 555-559, LA20-LA24 <i>Geometry Lab</i> 554 <i>Study Guide and Review</i> 564 #32-#37 <i>Practice Test</i> 565 #11-#16</p> <p>Teacher Wraparound Edition: 548b, 555b A 553, 559; AE 549-550, 556; FMC 556; PAA 549; SQ 548; TNT 552</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: 470-473, 479-484, 486-491, 494-499, 507 #36-#38, 603 #53-#55, LA10-LA14 <i>Geometry Lab</i> 485, 493 <i>Mid-Chapter Quiz</i> 492 <i>Study Guide and Review</i> 509-513 <i>Practice Test</i> 515</p> <p>Teacher Wraparound Edition: A 491, LA14; AE 480-481, 495-496, LA11; DI LA12; FMC 480, LA11; SQ 486</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: 502-507 <i>Study Guide and Review</i> 514 <i>Practice Test</i> 515 #15-#16</p> <p>Teacher Wraparound Edition: A 507; AE 503-504</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: 604-609, 610-614, 615-619 <i>Study Guide and Review</i> 623-624 <i>Practice Test</i> 625 #28-#33 <i>Test Practice</i> 627 #12</p> <p>Teacher Wraparound Edition: A 609, 611, 619; AE 605-606, 611, 616; FMC 605, 611, 616; SQ 604, 610, 615; TNT 607, 618</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: 604-609, 610-614, 615-619 <i>Study Guide and Review</i> 623-624 <i>Practice Test</i> 625 #28-#33 <i>Test Practice</i> 627 #12</p> <p>Teacher Wraparound Edition: A 609, 611, 619; AE 605-606, 611, 616; FMC 605, 611, 616; SQ 604, 610, 615; TNT 607, 618</p>

STANDARDS	PAGE REFERENCES
Construct geometric shapes	
G.SR.06.05 Use paper folding to perform basic geometric constructions of perpendicular lines, midpoints of line segments and angle bisectors; justify informally.	Student Edition: 609 #43-#46, 613 #20-#22, 614 #25
DATA AND PROBABILITY	
Understand the concept of probability and solve problems	
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.	Student Edition: 381-386, 389-393, 394-398 <i>Probability Lab</i> 387 <i>Mid-Chapter Quiz</i> 388 #20-#24 <i>Study Guide and Review</i> 408-409 <i>Practice Test</i> 411 #13-#21 Teacher Wraparound Edition: A 386, 398; AE 382-383; FMC 382; SQ 381
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.	Student Edition: 389-393, 394-398, 405 #36 <i>Probability Lab</i> 387 <i>Mid-Chapter Quiz</i> 388 #20-#24 <i>Study Guide and Review</i> 408-409 <i>Practice Test</i> 411 #13-#21 Teacher Wraparound Edition: A 386, 398; AE 382-383, 390, 395; FMC 382; PAA 384; SQ 381, 389, 394

* revised expectations in italics