



Math Connects

Concepts, Skills, and Problem Solving

Course 1

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STANDARDS	PAGE REFERENCES
NUMBER AND OPERATIONS	
Understand division of whole numbers	
N.MR.05.01 Understand the meaning of division of whole numbers with and without remainders; relate division to fractions and to repeated subtraction.	Student Edition: 23 #20-#25, 27 #13-#16, 36 #54-#57, 77 #8-#14, 137 #8-#14, 172 #58-#61, 176 #41-#42, 423 #58-#59, 571 #18-#23, 744
N.MR.05.02 Relate division of whole numbers with remainders to the form $a = bq + r$, e.g., $34 \div 5 = 6 \text{ r } 4$, so $5 \cdot 6 + 4 = 34$; note remainder (4) is less than divisor (5).	Student Edition: 77 Ex. 2, 247 #11-#14, 744 Teacher Wraparound Edition: FMC 174
N.MR.05.03 Write mathematical statements involving division for given situations.	Student Edition: 173-176, 179-183, 293-297, 298-301, 744 <i>Study Guide and Review</i> 189-190, 306 <i>Practice Test</i> 191, 307 Teacher Wraparound Edition: A 176, 183; AE 174, 299; SC 173, 293; TNT 301

STANDARDS	PAGE REFERENCES
Multiply and divide whole numbers	
<p>N.FL.05.04 Multiply a multi-digit number by a two-digit number; recognize and be able to explain common computational errors such as not accounting for place value.</p>	<p>Student Edition: 23 #14-#19, 137 #1-#7, 163-166, 169-172, 744</p> <p>Teacher Wraparound Edition: 169a, 169b A 166; FMC 164</p>
<p>N.FL.05.05 Solve applied problems involving multiplication and division of whole numbers.*</p>	<p>Student Edition: 24-27, 63-67, 137 #14, 163-166, 173-176, 744 <i>Problem-Solving Investigation</i> 399-400, 661-662</p> <p>Teacher Wraparound Edition: A 176; FMC 164, 174; SC 173, 163</p>
<p>N.FL.05.06 Divide fluently up to a four-digit number by a two-digit number.</p>	<p>Student Edition: 137 #12, 173-176, 179-183, 423 #58</p> <p>Teacher Wraparound Edition: A 183; AE 180 #4, FMC 174</p>
Find prime factorizations of whole numbers	
<p>N.MR.05.07 Find the prime factorization of numbers from 2 through 50, express in exponential notation, e.g., $24 = 2^3 \times 3^1$, and understand that every whole number greater than 1 is either prime or can be expressed as a product of primes.*</p>	<p>Student Edition: 28-31, 34 #7-#9, 35 #26-#33, 36 #48-#52, 40 #36-#39, 195 #8-#10, 198 Ex. #3, 217 Ex. 2-3, 333 #31-#34 <i>Mid-Chapter Quiz</i> 41 #3-#6 <i>Study Guide and Review</i> 69 #8-#13, 239 Ex. 1, 240 Ex. 7 <i>Practice Test</i> 73 #2-#5 <i>Test Practice</i> 74 #5, 361 #10</p> <p>Teacher Wraparound Edition: 28b A 31; AE 29; TNT 29</p>
Understand meaning of decimal fractions and percentages	
<p>N.ME.05.08 Understand the relative magnitude of ones, tenths, and hundredths and the relationship of each place value to the place to its right, e.g., one is 10 tenths, one tenth is 10 hundredths.</p>	<p>Student Edition: 138-141, 143, 145 #44-#47, 195 #11-#14, 738 <i>Math Lab</i> 162, 167-168</p> <p>Teacher Wraparound Edition: DI 138; TNT 139</p>

STANDARDS	PAGE REFERENCES
<p>N.ME.05.09 Understand percentages as parts out of 100, use % notation, and express a part of a whole as a percentage.</p>	<p>Student Edition: 365-369, 370-375, 377-380 <i>Math Lab</i> 364 <i>Mid-Chapter Quiz</i> 388 <i>Problem-Solving Investigation</i> 399-400 <i>Study Guide and Review</i> 406-407 <i>Practice Test</i> 411 Teacher Wraparound Edition: FMC 366; SC 365, 377; TNT 365</p>
<p>Understand fractions as division statements; find equivalent fractions</p>	
<p>N.ME.05.10 Understand a fraction as a statement of division, e.g., $2 \div 3 = 2/3$, using simple fractions and pictures to represent.</p>	<p>Student Edition: 209-212, 230-232, 247 #11-#14, 253 #45-#48 <i>Mid-Chapter Quiz</i> 213 #19-#22 <i>Study Guide and Review</i> 239, 242 <i>Practice Test</i> 243 #8, #17 Teacher Wraparound Edition: A 232; TNT 210, 367</p>
<p>N.ME.05.11 Given two fractions, e.g., $\frac{1}{2}$ and $\frac{1}{4}$, express them as fractions with a common denominator, but not necessarily a <u>least</u> common denominator, e.g., $\frac{1}{2} = \frac{4}{8}$ and $\frac{3}{4} = \frac{6}{8}$; use denominators less than 12 or factors of 100.*</p>	<p>Student Edition: 220-224, 263-268 <i>Math Lab</i> 261-262 <i>Study Guide and Review</i> 239, 242 <i>Practice Test</i> 243 #13-#16 Teacher Wraparound Edition: A 268; FMC 221, 264; SC 220; TNT 221</p>
<p>Multiply and divide fractions</p>	
<p>N.ME.05.12 Find the product of two unit fractions with small denominators using an area model.*</p>	<p>Student Edition: 276 Ex. 1-2, 282-286, 287-290 <i>Math Lab</i> 280-281 <i>Study Guide and Review</i> 306 <i>Practice Test</i> 307 Teacher Wraparound Edition: 282b A 286; AE 283, 288; FMC 283; SC 282, 287; TNT 283</p>

STANDARDS	PAGE REFERENCES
<p>N.MR.05.13 Divide a fraction by a whole number and a whole number by a fraction, using simple unit fractions.*</p>	<p>Student Edition: 293-297, 298-301 <i>Math Lab</i> 291-292 <i>Study Guide and Review</i> 306 <i>Practice Test</i> 307</p> <p>Teacher Wraparound Edition: 293a A 297; SC 293</p>
<p>Add and subtract fractions using common denominators</p>	
<p>N.FL.05.14 Add and subtract fractions with unlike denominators through 12 and/or 100, using the common denominator that is the product of the denominators of the 2 fractions, e.g., $3/8 + 7/10$: use 80 as the common denominator.*</p>	<p>Student Edition: 263-268, 270-274 <i>Math Lab</i> 261-262 <i>Reading to Solve Problems</i> 269 <i>Mid-Chapter Quiz</i> 275 <i>Study Guide and Review</i> 304-305 <i>Practice Test</i> 307</p> <p>Teacher Wraparound Edition: 263b AE 264-265, 271; DI 266; FMC 271; SC 270</p>
<p>Multiply and divide by powers of ten</p>	
<p>N.MR.05.15 Multiply a whole number by powers of 10: 0.01, 0.1, 1, 10, 100, 1,000; and identify patterns.</p>	<p>Student Edition: 67 #39, 164-166, 417 #15-#21, 445-449</p> <p>Teacher Wraparound Edition: FMC 230, 446; SC 179</p>
<p>N.FL.05.16 Divide numbers by 10's, 100's, 1,000's using mental strategies.</p>	<p>Student Edition: 445-449</p> <p>Teacher Wraparound Edition: FMC 446; TNT 448</p>
<p>N.MR.05.17 Multiply one-digit and two-digit whole numbers by decimals up to two decimal places.</p>	<p>Student Edition: 163-166, 172 #52-#55 <i>Math Lab</i> 162 <i>Study Guide and Review</i> 189 <i>Practice Test</i> 191</p> <p>Teacher Wraparound Edition: 163b AE 164; FMC 164; TNT 166</p>

STANDARDS	PAGE REFERENCES
Solve applied problems with fractions	
<p>N.FL.05.18 Use mathematical statements to represent an applied situation involving addition and subtraction of fractions.*</p>	<p>Student Edition: 263-268, 270-274, 286 #54 <i>Math Lab</i> 261-262 <i>Reading to Solve Problems</i> 269 <i>Mid-Chapter Quiz</i> 275 #13-#20 <i>Study Guide and Review</i> 304-305 <i>Practice Test</i> 307 #7-#12</p> <p>Teacher Wraparound Edition: 270b AE 265, 271-272; SC 270</p>
<p>N.MR.05.19 Solve contextual problems that involve finding sums and differences of fractions with unlike denominators using knowledge of equivalent fractions.*</p>	<p>Student Edition: 263-268, 270-274, 286 #54 <i>Math Lab</i> 261-262 <i>Reading to Solve Problems</i> 269 <i>Mid-Chapter Quiz</i> 275 #13-#20 <i>Study Guide and Review</i> 304-305 <i>Practice Test</i> 307 #7-#12</p> <p>Teacher Wraparound Edition: AE 265, 272</p>
<p>N.FL.05.20 Solve applied problems involving fractions and decimals; include rounding of answers and checking reasonableness.*</p>	<p>Student Edition: 146-149, 150-154, 156-160, 163-166, 169-172, 173-176, 179-183, 249-253, 256-260, 263-268, 270-274, 282-286, 287-290, 293-297, 298-301 <i>Math Lab</i> 155, 162, 167, 177, 248, 261, 280, 291 <i>Mid-Chapter Quiz</i> 161 #23-#25, 275 #8-#20 <i>Study Guide and Review</i> 188-190, 302-306 <i>Practice Test</i> 191 #14-#25, 307 <i>Reading to Solve Problems</i> 269</p> <p>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</p>
<p>N.MR.05.21 Solve for the unknown in equations such as $\frac{1}{4} + x = 7/12$.*</p>	<p>Student Edition: 647 #26-#27, 653 #28-#29, 659 #25-#27, 660 #38</p>

STANDARDS	PAGE REFERENCES
Express, interpret, and use ratios; find equivalences	
<p>N.MR.05.22 Express fractions and decimals as percentages and vice versa.</p>	<p>Student Edition: 365-369, 375 #20-#22, 377-380, 386 #41, 393 #31, 405 #37-#40 <i>Mid-Chapter Quiz</i> 388 <i>Study Guide and Review</i> 407-408 <i>Practice Test</i> 411</p> <p>Teacher Wraparound Edition: 365b, 377b A 380; AE 366-367, 378; SC 377; TNT 365;</p>
<p>N.ME.05.23 Express ratios in several ways given applied situations, e.g., 3 cups to 5 people, 3 : 5, 3/5; recognize and find equivalent ratios.</p>	<p>Student Edition: 314-319, 322-327, 331-333, 339 #39-#41, 348 #32-#35 <i>Graphing Calculator Lab</i> 328 <i>Mid-Chapter Quiz</i> 340 <i>Study Guide and Review</i> 356-357 <i>Practice Test</i> 359</p> <p>Teacher Wraparound Edition: 314b A 319; AE 315, 323-324; FMC 323; PAA 316; SC 322</p>
MEASUREMENT	
Know, and convert among, measurement units within a given system	
<p>M.UN.05.01 Recognize the equivalence of 1 liter, 1,000 ml and 1,000 cm³ and include conversions among liters, milliliters, and cubic centimeters.</p>	<p>Student Edition: 432-436, 437-441, 445-449, 454 #34-#37, 458 #34-#36 <i>Measurement Lab</i> 430-431 <i>Mid-Chapter Quiz</i> 444 <i>Study Guide and Review</i> 462-463 <i>Practice Test</i> 465</p> <p>Teacher Wraparound Edition: 445b A 449; AE 446; FMC 446</p>

STANDARDS	PAGE REFERENCES
<p>M.UN.05.02 Know the units of measure of volume: cubic centimeter, cubic meter, cubic inches, cubic feet, cubic yards, and use their abbreviations (cm^3, m^3, in^3, ft^3, yd^3).</p>	<p>Student Edition: 548-553, 559 #32 <i>Reading Math</i> 549 <i>Study Guide and Review</i> 564 <i>Practice Test</i> 565 #11-#13 Teacher Wraparound Edition: FMC 549; PAA 552</p>
<p>M.UN.05.03 Compare the relative sizes of one cubic inch to one cubic foot, and one cubic centimeter to one cubic meter.</p>	<p>Student Edition: 548-553 Teacher Wraparound Edition: PAA 552</p>
<p>M.UN.05.04 Convert measurements of length, weight, area, volume, and time within a given system using easily manipulated numbers.</p>	<p>Student Edition: 418-423, 424-429, 432-436, 437-441, 445-449, 450-454, 534-538, 540-544, 548-553 <i>Measurement Lab</i> 430-431, 539 <i>Mid-Chapter Quiz</i> 444, 545 <i>Study Guide and Review</i> 462-464 <i>Practice Test</i> 465 Teacher Wraparound Edition: AE 419, 438; DI 428, 435, 454; PAA 538; SC 418, 450; TNT 433, 552</p>
<p>Find areas of geometric shapes using formulas</p>	
<p>M.PS.05.05 Represent relationships between areas of rectangles, triangles, and parallelograms using models.</p>	<p>Student Edition: 534-538, 540-544 <i>Measurement Lab</i> 539 <i>Mid-Chapter Quiz</i> 545 Teacher Wraparound Edition: AE 535, 541; FMC 541; SC 534, 540; TNT 535</p>
<p>M.TE.05.06 Understand and know how to use the area formula of a triangle: $A = \frac{1}{2}bh$ (where b is length of the base and h is the height), and represent using models and manipulatives.</p>	<p>Student Edition: 540-544, 553 #37 <i>Measurement Lab</i> 539 <i>Mid-Chapter Quiz</i> 545 #16-#18 <i>Study Guide and Review</i> 563 #25-#29 <i>Practice Test</i> 565 #6-#8 Teacher Wraparound Edition: 540b AE 541; FMC 541; SC 540</p>

STANDARDS	PAGE REFERENCES
<p>M.TE.05.07 Understand and know how to use the area formula for a parallelogram: $A = bh$, and represent using models and manipulatives.</p>	<p>Student Edition: 63-67, 534-538, 544 #30 <i>Study Guide and Review</i> 72, 563 <i>Practice Test</i> 73 #19-#20, 565 <i>Mid-Chapter Quiz</i> 545 #12-#14 Teacher Wraparound Edition: 534b AE 535-536; FMC 535; PAA 538; SC 534</p>
<p>Understand the concept of volume</p>	
<p>M.TE.05.08 Build solids with unit cubes and state their volumes.</p>	<p>Student Edition: 548-553 Teacher Wraparound Edition: PAA 552; T548</p>
<p>M.TE.05.09 Use filling (unit cubes or liquid), and counting or measuring to find the volume of a cube and rectangular prism.</p>	<p>Student Edition: 548-553 Teacher Wraparound Edition: PAA 552; T548</p>
<p>M.PS.05.10 Solve applied problems about the volumes of rectangular prisms using multiplication and division and using the appropriate units.</p>	<p>Student Edition: 548-553, 559 #32 <i>Study Guide and Review</i> 564 <i>Practice Test</i> 565 #11-#13 Teacher Wraparound Edition: 548b A 553; AE 549-550; DI 550; PAA 549, 552, 553; SC 548</p>
<p>GEOMETRY</p>	
<p>Know the meaning of angles, and solve problems</p>	
<p>G.TR.05.01 Associate an angle with a certain amount of turning; know that angles are measured in degrees; understand that 90°, 180°, 270°, and 360° are associated respectively, with $\frac{1}{4}$, $\frac{1}{2}$, and $\frac{3}{4}$, and full turns.</p>	<p>Student Edition: 615-619 <i>Study Guide and Review</i> 624 <i>Practice Test</i> 625 #32-#33 Teacher Wraparound Edition: 615b A 619; AE 616; TNT 618</p>

STANDARDS	PAGE REFERENCES
<p>G.GS.05.02 Measure angles with a protractor and classify them as acute, right, obtuse, or straight.</p>	<p>Student Edition: 470-473, 474-478, 484 #43-#48, 491 #40-#42 <i>Mid-Chapter Quiz</i> 492 <i>Study Guide and Review</i> 510 <i>Practice Test</i> 515 #1-#4</p> <p>Teacher Wraparound Edition: 470b A478; AE 471, 475; DI 473; FMC 471; SC 470, 474</p>
<p>G.GS.05.03 Identify and name angles on a straight line and vertical angles.</p>	<p>Student Edition: 479-484, 491 #39, 499 #38-#40 <i>Mid-Chapter Quiz</i> 492</p> <p>Teacher Wraparound Edition: AE 480-481; FMC 480; SC 479</p>
<p>G.GS.05.04 Find unknown angles in problems involving angles on a straight line, angles surrounding a point, and vertical angles.</p>	<p>Student Edition: 479-484, 491 #39 <i>Geometry Lab</i> 485 <i>Mid-Chapter Quiz</i> 492</p> <p>Teacher Wraparound Edition: 479b AE 480-481; DI 484</p>
<p>G.GS.05.05 Know that angles on a straight line add up to 180° and angles surrounding a point add up to 360°; justify informally by “surrounding” a point with angles.</p>	<p>Student Edition: 470-473, 474-478, 479-484, 491 #39 <i>Geometry Lab</i> 485 <i>Mid-Chapter Quiz</i> 492</p> <p>Teacher Wraparound Edition: 479b AE 480-481; DI 484, FMC 480; SC 474</p>
<p>G.GS.05.06 Understand why the sum of the interior angles of a triangle is 180° and the sum of the interior angles of a quadrilateral is 360°, and use these properties to solve problems.</p>	<p>Student Edition: 486-491, 494-499, 507 #36-#38 <i>Geometry Lab</i> 485, 493 <i>Mid-Chapter Quiz</i> 492 #13-#15 <i>Study Guide and Review</i> 512-513 <i>Practice Test</i> 515</p> <p>Teacher Wraparound Edition: AE 487, 495-496; SC 486</p>

STANDARDS	PAGE REFERENCES
Solve problems about geometric shapes	
<p>G.GS.05.07 Find unknown angles and sides using the properties of: triangles, including right, isosceles, and equilateral triangles; parallelograms, including rectangles and rhombuses; and trapezoids.</p>	<p>Student Edition: 486-491, 494-499, 507 #36-#38 <i>Geometry Lab</i> 485, 493 <i>Mid-Chapter Quiz</i> 492 #13-#15 <i>Study Guide and Review</i> 512-513 <i>Practice Test</i> 515</p> <p>Teacher Wraparound Edition: AE 487, 495-496; SC 486</p>
DATA AND PROBABILITY	
Construct and interpret line graphs	
<p>D.RE.05.01 Read and interpret line graphs, and solve problems based on line graphs, e.g., distance-time graphs, and problems with two or three line graphs on same axes, comparing different data.</p>	<p>Student Edition: 81-85, 88-91, 95 #21-#24, 100 #26-#27, 118 #23-#24 <i>Spreadsheet Lab</i> 86-87 <i>Mid-Chapter Quiz</i> 101 #4 <i>Study Guide and Review</i> 127-128 <i>Practice Test</i> 131</p> <p>Teacher Wraparound Edition: 88b AE 89; FMC 89; TNT 90</p>
<p>D.RE.05.02 Construct line graphs from tables of data; include axis labels and scale.</p>	<p>Student Edition: 81-85, 88-91, 95 #21-#24, 100 #26-#27, 118 #23-#24 <i>Spreadsheet Lab</i> 86-87 <i>Mid-Chapter Quiz</i> 101 #4 <i>Study Guide and Review</i> 127-128 <i>Practice Test</i> 131</p> <p>Teacher Wraparound Edition: 88b AE 89; FMC 89; TNT 90</p>

STANDARDS	PAGE REFERENCES
Find and interpret mean and mode for a given set of data	
<p>D.AN.05.03 Given a set of data, find and interpret the mean (using the concept of fair share) and mode.</p>	<p>Student Edition: 102-106, 108-113, 118 #20-22, 125 #39-40 <i>Spreadsheet Lab</i> 107 <i>Study Guide and Review</i> 129 #23-28 <i>Practice Test</i> 131 #10-11</p> <p>Teacher Wraparound Edition: 102b A 106; AE 103, 109; SC 102, 108</p>
<p>D.AN.05.04 Solve multi-step problems involving means.</p>	<p>Student Edition: 102-106, 113 #24, 118 #21-#22 <i>Spreadsheet Lab</i> 107 <i>Study Guide and Review</i> 129 #23-#25 <i>Practice Test</i> 131</p> <p>Teacher Wraparound Edition: 102b A 106; FMC 103</p>

* revised expectations in italics