



Mathematics

Applications and Concepts
Course 1
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STANDARDS	PAGE REFERENCES
NUMBER AND OPERATIONS	
Understand division of whole numbers	
<p>N.MR.05.01 Understand the meaning of division of whole numbers with and without remainders; relate division to fractions and to repeated subtraction.</p>	<p>Student Edition: 5 #21-#26, 9 #16-#19, 10-13, 21 #57-#60, 143 #41-#44, 144-147, 186-189 <i>Prerequisite Skills</i> 590 <i>Extra Practice</i> 603 Teacher Wraparound Edition: A 147; B 144; DI 187; I-CE 187</p>
<p>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).</p>	<p>Student Edition: <i>Standardized Test Practice</i> 46 #3-#4 <i>Prerequisite Skills</i> 590, 591 <i>Extra Practice</i> 603</p>
<p>N.MR.05.03 Write mathematical statements involving division for given situations.</p>	<p>Student Edition: 9 #6, #10, 13 #36-#37 <i>Prerequisite Skills</i> 590, 591</p>
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: 5 #15-#20, 138 #55-#57 <i>Prerequisite Skills</i> 590</p>

STANDARDS	PAGE REFERENCES
<p>N.FL.05.05 Solve applied problems involving multiplication and division of whole numbers.*</p>	<p>Student Edition: 9 #12, 13 #48, 39-41, 352 #40-#44, 386-389 <i>Study Guide and Review</i> 44 #56-#57 <i>Prerequisite Skills</i> 591 Teacher Wraparound Edition: I-CE 40</p>
<p>N.FL.05.06 Divide fluently up to a four-digit number by a two-digit number.</p>	<p>Student Edition: 144-147, 152-155 <i>Mid-Chapter Practice Test</i> 148 #15, #17 <i>Prerequisite Skills</i> 590 Teacher Wraparound Edition: A 155; I-CE 145, 153</p>
<p>Find prime factorizations of whole numbers</p>	
<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: 14-17, 19-21, 189 #59-#62 <i>Hands-on Mini Lab</i> 18 <i>Mid-Chapter Practice Test</i> 22 #10-#13 <i>The Game Zone</i> 23 <i>Study Guide and Review</i> 43 #24-#27 Teacher Wraparound Edition: A 17, 21; DI 15; I-CE 15 #3, 19</p>
<p>Understand meaning of decimal fractions and percentages</p>	
<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: 102-105, 110 #29-#30, 113 #33 <i>Hands-on Lab</i> 100-101 <i>Prerequisite Skills</i> 586 Teacher Wraparound Edition: A 105; B 102; DI 103; I-CE 103</p>
<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: 395-397, 400-403 <i>Mid-Chapter Practice Test</i> 398 #16-#18 <i>Hands-on Lab</i> 407 Teacher Wraparound Edition: A 403; B 395, 400</p>

STANDARDS	PAGE REFERENCES
Understand fractions as division statements; find equivalent fractions	
<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: 186-189 <i>Mid-Chapter Practice Test</i> 190 #16-#18 Teacher Wraparound Edition: DI 186</p>
<p>N.ME.05.11 Given two fractions, e.g., $1/2$ and $1/4$, express them as fractions with a common denominator, but not necessarily a least common denominator, e.g., $1/2 = 4/8$ and $3/4 = 6/8$; use denominators less than 12 or factors of 100.*</p>	<p>Student Edition: 198-201, 205 #37-#40, 209 #50 <i>Study Guide and Review</i> 212 #35-#41 <i>Practice Test</i> 213 #20 Teacher Wraparound Edition: A 201; I-CE 199</p>
Multiply and divide fractions	
<p>N.ME.05.12 Find the product of two unit fractions with small denominators using an area model.*</p>	<p>Student Edition: 261-264, 267 #39-#42 <i>Hands-on Lab</i> 259-260 <i>The Game Zone</i> 269 Teacher Wraparound Edition: A 264; DI 262; I-CE 262</p>
<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: 272-275, 277 #3-#4 <i>Hands-on Lab</i> 270-271 <i>Study Guide and Review</i> 286 #31-#32 <i>Practice Test</i> 287 #16-#17, 20 Teacher Wraparound Edition: A 275; I-CE 273 #4-#5</p>
Add and subtract fractions using common denominators	
<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: 235-238, 240-243, 244-247 <i>Hands-on Lab</i> 234 Teacher Wraparound Edition: A 238, 247; B 235, 240; DI 236, 241; I-CE 236, 241, 245</p>

STANDARDS	PAGE REFERENCES
Multiply and divide by powers of ten	
<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: 136 #5, 138 #36-#41, 152 Ex. 1-3, 409-412, 463 #15-#20, 487 #35-#36 <i>Study Tip</i> 405</p>
<p>N.FL.05.16 Divide numbers by 10's, 100's, 1,000's using mental strategies.</p>	<p>Student Edition: 404-407, 463 #21-#24, 487 #37-#38 <i>Study Tip</i> 404 Teacher Wraparound Edition: I-CE 405</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: 135-138, 143 #36-#39, 147 #40 <i>Hands-on Lab</i> 134 <i>Mid-Chapter Practice Test</i> 148 #3-#8 <i>Study Guide and Review</i> 166 #9-#18 <i>Practice Test</i> 169 #3-#5 Teacher Wraparound Edition: DI 136; I-CE 136</p>
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: 229 Ex. 3, 230 #25-#33, 236 Ex. 3, 238 #32-#34 <i>Mid-Chapter Practice Test</i> 232 #9, #11</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: 235-238, 240-243, 244-247 Teacher Wraparound Edition: A 243; B 244; DI 236; I-CE 236, 241</p>
<p>N.FL.05.20 Solve applied problems involving fractions and decimals; include rounding of answers and checking reasonableness.*</p>	<p>Student Edition: 111-113, 116-119, 202-205, 206-209, 219-222, 223-225 <i>Mid-Chapter Practice Test</i> 114 #10-#13 <i>Study Guide and Review</i> 212 #42-#57 <i>Hands-on Lab</i> 218 Teacher Wraparound Edition: A 112, 119, 205; B 111, 223; DI 112, 220; I-CE 112, 203</p>
<p>N.MR.05.21 Solve for the unknown in equations such as $\frac{1}{4} + x = 7/12$.*</p>	<p>Student Edition: 341 #30-#31, 346 #32-#33, 347 #35, #41, 353 #44-#51, 357 #33</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: 400-403, 404-406, 412 #43-#47, 417 #30-#33 <i>Study Guide and Review</i> 420 #32-#51 <i>Practice Test</i> 421 #10-#18</p> <p>Teacher Wraparound Edition: A 403, 406; B 400, 404; DI 401, 404; I-CE 401, 405</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: 380-383, 389 #32-#33, 393 #19-#20 <i>Hands-on Lab</i> 384-385 <i>Mid-Chapter Practice Test</i> 398 #3-#6 <i>The Game Zone</i> 399</p> <p>Teacher Wraparound Edition: A 382; B 380; DI 381; I-CE 381</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: 484-487, 490-493 <i>Hands-on Lab</i> 474-475</p> <p>Teacher Wraparound Edition: A 487, 493; I-CE 485</p>
<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 (cm³, m³, in³, ft³, yd³).</p>	<p>Student Edition: 570-573 <i>Study Guide and Review</i> 580 #16-#17 <i>Practice Test</i> 581 #11-#14</p> <p>Teacher Wraparound Edition: DI 571; I-CE 571</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: 572 #17-#19</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: 39-41, 158-160, 465-468, 470-473, 476-479, 484-487, 494-497, 570-573 <i>Hands-on Lab</i> 464 <i>Spreadsheet Investigation</i> 469 <i>Problem-Solving Strategy</i> 488-489</p> <p>Teacher Wraparound Edition: A 497; B 39; DI 140, 162; I-CE 495</p>

STANDARDS	PAGE REFERENCES
Find areas of geometric shapes using formulas	
<p>M.PS.05.05 Represent relationships between areas of rectangles, triangles, and parallelograms using models.</p>	<p>Student Edition: 39-41, 546-549, 551-554 <i>Hands-on Lab</i> 464, 550 <i>Spreadsheet Investigation</i> 469 Teacher Wraparound Edition: A 554; B 546, 551; DI 547; I-CE 547</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: 551-554, 559 #25-#26, 566 #21 <i>Hands-on Lab</i> 550 <i>Mid-Chapter Practice Test</i> 562 #4-#5 Teacher Wraparound Edition: A 554; B 551; DI 552; I-CE 552</p>
<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: 546-549, 554 #28, 559 #26 <i>Mid-Chapter Practice Test</i> 562 #1, #3, #6, #12 Teacher Wraparound Edition: A 549; B 546; DI 547; I-CE 547</p>
Understand the concept of volume	
<p>M.TE.05.08 Build solids with unit cubes and state their volumes.</p>	<p>Student Edition: 570-571, 572 #2 Teacher Wraparound Edition: DI 571</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: 570-573 <i>Hands-on Lab</i> 574 Teacher Wraparound Edition: B 570; DI 571</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: 570-573, 578 #25 <i>Study Guide and Review</i> 580 #16-#17 <i>Practice Test</i> 581 #11-#14 Teacher Wraparound Edition: A 573; B 570; DI 571; I-CE 571</p>

STANDARDS	PAGE REFERENCES
GEOMETRY	
Know the meaning of angles, and solve problems	
<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 $1/4$, $1/2$, and $3/4$, and full turns.</p>	<p>Student Edition: 529-531 <i>Hands-on Lab</i> 532-533 Teacher Wraparound Edition: I-CE 529</p>
<p>G.GS.05.02 Measure angles with a protractor and classify them as acute, right, obtuse, or straight.</p>	<p>Student Edition: 506-509, 510-512, 525 #34-#36 <i>Mid-Chapter Practice Test</i> 518 #3-#8 <i>The Game Zone</i> 519 Teacher Wraparound Edition: A 509, 512; B 506, 510; DI 507, 510; I-CE 507, 511</p>
<p>G.GS.05.03 Identify and name angles on a straight line and vertical angles.</p>	<p>Student Edition: 509 #20-#25, 549 #22-#26</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: 506-509, 510-512, 517 #24, 525 #33 Teacher Wraparound Edition: A 509; I-CE 507</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: 506-509, 512 #26, 529 <i>Hands-on Lab</i> 532-533 Teacher Wraparound Edition: A 509</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: 525 #27-#30 <i>Hands-on Lab</i> 526-527 Teacher Wraparound Edition: DI 523</p>
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: 522-525, 536 #28 Teacher Wraparound Edition: A 525; B 522</p>

STANDARDS	PAGE REFERENCES
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: 56-59, 66-69, 75 #30-#32, 87 Ex. 2, 89 #11 <i>Mid-Chapter Practice Test</i> 70 #8-#9</p> <p>Teacher Wraparound Edition: A 59; DI 57, 68; I-CE 58, 67</p>
<p>D.RE.05.02 Construct line graphs from tables of data; include axis labels and scale.</p>	<p>Student Edition: 56-59, 65 #20-#21 <i>Spreadsheet Investigation</i> 60-61</p> <p>Teacher Wraparound Edition: A 59; I-CE 58</p>
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: 76-78, 80-83 <i>Spreadsheet Investigation</i> 79</p> <p>Teacher Wraparound Edition: A 83; B 76, 80; I-CE 77, 81</p>
<p>D.AN.05.04 Solve multi-step problems involving means.</p>	<p>Student Edition: 76-78, 86-89 <i>Spreadsheet Investigation</i> 79</p> <p>Teacher Wraparound Edition: A 78; B 76; I-CE 77</p>