GRADES 3–12

Third Edition
TRANSMATH®

CCSS

TransMath, Grades 3–12

Correlated to the Common Core State Standards for Mathematics

December 2015

VOYAGER SOPRIS LEARNING®

GRADE 3 CCSS	Lesson Subsection (and Page Number) in *TransMath 1* Where Standard is Addressed	Lesson Subsection (and Page Number) in *TransMath 2* Where Standard is Addressed	Lesson Subsection (and Page Number) in *TransMath 3* Where Standard is Addressed
CCSS.Math.Content.3.G.A.1 Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides); and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.	**Unit 6:** Lesson 1, Problem Solving (649-651); Lesson 2, Problem Solving (659-661); Lesson 3, Problem Solving (668-670); Lesson 10, Problem Solving (727-730); **Unit 7:** Lesson 1, Problem Solving (747-749); Lesson 2, Problem Solving (756-757)	**Unit 3:** Lesson 12, Building Number Concepts (350-354) **Unit 5:** Lesson 3, Problem Solving (518-519); Lesson 4, Problem Solving (525-526); Lesson 9, Problem Solving (569-570); Lesson 12, Problem Solving (594-595)	
CCSS.Math.Content.3.G.A.2 Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.		**Unit 1:** Lesson 2, Building Number Concepts (16-18); Lesson 2, Problem Solving (19-20); Lesson 3, Building Number Concepts (23-26); Lesson 4, Building Number Concepts (32-34); Lesson 4, Problem Solving (35-37); Lesson 5, Building Number Concepts (40-43); Lesson 6, Building Number Concepts (48-50); Lesson 8, Building Number Concepts (65-67); Lesson 10, Building Number Concepts (81-88); Lesson 10, Problem Solving (89-92)	**Unit 1:** Lesson 1, Building Number Concepts (9-13)
CCSS.Math.Content.3.MD.A.1 Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.			
CCSS.Math.Content.3.MD.A.2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g); kilograms (kg); and liters (l).6 Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.[7]	**Unit 6:** Lesson 6, Problem Solving (692-693); Lesson 7, Problem Solving (700-703)		

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CCSS.Math.Content.3.MD.B.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.	**Unit 1:** Lesson 5, Problem Solving (41-42); Lesson 6, Problem Solving (50-51); Lesson 7, Problem Solving (58-59) **Unit 2:** Lesson 2, Problem Solving (144-145)	**Unit 8:** Lesson 1, Problem Solving (866-867)	
CCSS.Math.Content.3.MD.B.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.	**Unit 8:** Lesson 12, Problem Solving (932-933); **Unit 9:** Lesson 7, Building Number Concepts (1020-1022); Lesson 7, Problem Solving (1023-1025); Lesson 8, Problem Solving (1032-1033)		
CCSS.Math.Content.3.MD.C.5 Recognize area as an attribute of plane figures and understand concepts of area measurement.	**Unit 5:** Lesson 1, Problem Solving (519-520); Lesson 2, Problem Solving (523-527); Lesson 3, Problem Solving (533-535); Lesson 4, Problem Solving (542-543); Lesson 8, Problem Solving (575-576); Lesson 9, Problem Solving (579-583); Lesson 11, Problem Solving (598-599); Lesson 12, Problem Solving (606-608); Lesson 13, Problem Solving (614-615); Lesson 15, Problem Solving (629-632)		
CCSS.Math.Content.3.MD.C.5a A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area.	**Unit 3:** Lesson 13, Problem Solving (346-351); Lesson 14, Problem Solving (354-357); Lesson 15, Problem Solving (364-369) **Unit 5:** Lesson 2, Problem Solving (523-527); Lesson 3, Problem Solving (533-535); Lesson 4, Problem Solving (542-543)		
CCSS.Math.Content.3.MD.C.5b A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.	**Unit 3:** Lesson 13, Problem Solving (346-351); Lesson 14, Problem Solving (354-357); Lesson 15, Problem Solving (364-369) **Unit 5:** Lesson 2, Problem Solving (523-527); Lesson 3, Problem Solving (533-535); Lesson 4, Problem Solving (542-543)		
CCSS.Math.Content.3.MD.C.6 Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).	**Unit 3:** Lesson 13, Problem Solving (346-351); Lesson 14, Problem Solving (354-357); Lesson 15, Problem Solving (364-369)		

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	Unit 5: Lesson 1, Problem Solving (519-520); Lesson 2, Problem Solving (523-527); Lesson 3, Problem Solving (533-535); Lesson 4, Problem Solving (542-543)		
CSS.Math.Content.**3.MD.C.7** Relate area to the operations of multiplication and addition.	**Unit 5:** Lesson 1, Problem Solving (519-520); Lesson 2, Problem Solving (523-527); Lesson 3, Problem Solving (533-535); Lesson 4, Problem Solving (542-543); Lesson 8, Problem Solving (575-576); Lesson 9, Problem Solving (579-583); Lesson 11, Problem Solving (598-599); Lesson 12, Problem Solving (606-608); Lesson 13, Problem Solving (614-615); Lesson 15, Problem Solving (629-632) **Unit 6:** Lesson 8, Building Number Concepts (706-708); Lesson 9, Building Number Concepts (714-717); Lesson 10, Building Number Concepts (722-726)		
CCSS.Math.Content.3.MD.C.7a Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.	**Unit 3:** Lesson 13, Problem Solving (346-351); Lesson 14, Problem Solving (354-357); Lesson 15, Problem Solving (364-369) **Unit 5:** Lesson 2, Problem Solving (523-527); Lesson 4, Problem Solving (542-543)		
CCSS.Math.Content.3.MD.C.7b Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.	**Unit 3:** Lesson 13, Problem Solving (346-351); Lesson 14, Problem Solving (354-357); Lesson 15, Problem Solving (364-369) **Unit 5:** Lesson 2, Problem Solving (523-527); Lesson 4, Problem Solving (542-543); Lesson 9, Problem Solving (579-583); Lesson 11, Problem Solving (598-599); Lesson 12, Problem Solving (606-608); Lesson 13, Problem Solving (614-615); Lesson 15, Problem Solving (629-632)		
CCSS.Math.Content.3.MD.C.7c Use tiling to	**Unit 3:** Lesson 13, Problem Solving (346-351);		
CCSS.Math.Content.3.MD.C.7d Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.	**Unit 5:** Lesson 4, Problem Solving (542-543); Lesson 12, Problem Solving (606-608); Lesson 13, Problem Solving (614-615); Lesson 15, Problem Solving (629-632)	**Unit 6:** Lesson 2, Problem Solving (653-654); Lesson 4, Problem Solving (663-666)	

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CSSS.Math.Content.3.MD.D.8 Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	**Unit 5:** Lesson 6, Problem Solving (558-561); Lesson 7, Problem Solving (568-569); Lesson 8, Problem Solving (575-576); Lesson 9, Problem Solving (579-583); Lesson 11, Problem Solving (598-599); Lesson 12, Problem Solving (606-608); Lesson 15, Problem Solving (629-632)	**Unit 6:** Lesson 9, Problem Solving (700-704)	
CCSS.Math.Content.3.NBT.A.1 Use place value understanding to round whole numbers to the nearest 10 or 100.	**Unit 1:** Lesson 10, Building Number Concepts (77-82); Lesson 11, Problem Solving (91-92); Lesson 12, Problem Solving (98-99) **Unit 2:** Lesson 6, Building Number Concepts (169-172); Lesson 7, Building Number Concepts (178-180); Lesson 7, Problem Solving (181-182); Lesson 8, Building Number Concepts (184-187); Lesson 8, Problem Solving (188-189); Lesson 9, Building Number Concepts (192-193); Lesson 9, Problem Solving (194-195); Lesson 13, Problem Solving (224-225); Lesson 15, Building Number Concepts (235-238)		
CCSS.Math.Content.3.NBT.A.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	**Unit 1:** Lesson 3, Building Number Concepts (27-29); Lesson 4, Building Number Concepts (34-35); Lesson 6, Building Number Concepts (47-49); Lesson 7, Building Number Concepts (54-57); Lesson 8, Building Number Concepts (62-64); Lesson 9, Building Number Concepts (69-72); Lesson 11, Building Number Concepts (87-90); Lesson 15, Building Number Concepts (113-115) **Unit 2:** Lesson 1, Building Number Concepts (133-135); Lesson 1, Problem Solving (134-137); Lesson 2, Building Number Concepts (140-143); Lesson 2, Problem Solving (144-145); Lesson 3, Building Number Concepts (148-150); Lesson 4, Building Number Concepts (154-157); Lesson 5, Building Number Concepts (162-164); Lesson 6, Building Number Concepts (169-172); Lesson 7, Building Number Concepts (178-180);		

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	Lesson 8, Building Number Concepts (184-187); Lesson 9, Building Number Concepts (192-193); Lesson 10, Building Number Concepts (198-201); Lesson 11, Building Number Concepts (206-208); Lesson 11, Problem Solving (209-210); Lesson 12, Building Number Concepts (213-216); Lesson 12, Problem Solving (217-218); Lesson 13, Building Number Concepts (221-223); Lesson 14, Building Number Concepts (228-230); Lesson 14, Problem Solving (231-232); Lesson 15, Building Number Concepts (235-238); Lesson 15, Problem Solving (239-240)		
CCSS.Math.Content.3.NBT.A.3 Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations.	**Unit 3:** Lesson 1, Building Number Concepts (253-255); Lesson 1, Problem Solving (256-259); Lesson 2, Building Number Concepts (262-264); Lesson 3, Building Number Concepts (270-272); Lesson 11, Building Number Concepts (334-336); Lesson 15, Building Number Concepts (360-363); Lesson 15, Problem Solving (364-369) **Unit 4:** Lesson 2, Building Number Concepts (391-394); Lesson 3, Problem Solving (403-404)		
CCSS.Math.Content.3.NF.A.1 Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size 1/b.	**Unit 8:** Lesson 1, Building Number Concepts (837-841); Lesson 2, Building Number Concepts (847-849); Lesson 3, Building Number Concepts (854-857); Lesson 4, Building Number Concepts (864-868); Lesson 6, Building Number Concepts (881-884); Lesson 7, Building Number Concepts (890-892); Lesson 8, Building Number Concepts (897-899); Lesson 9, Building Number Concepts (905-907); Lesson 10, Building Number Concepts (913-915); Lesson 11, Building Number Concepts (920-922); Lesson 12, Building Number Concepts (928-931); Lesson 13, Building Number Concepts (936-940); Lesson 14, Building Number Concepts	**Unit 1:** Lesson 2, Building Number Concepts (16-18); Lesson 3, Building Number Concepts (23-26); Lesson 4, Building Number Concepts (32-34); Lesson 5, Building Number Concepts (40-43); Lesson 6, Building Number Concepts (48-50); Lesson 7, Building Number Concepts (56-58); Lesson 8, Building Number Concepts (65-67); Lesson 9, Building Number Concepts (72-75); Lesson 10, Building Number Concepts (81-88); Lesson 10, Problem Solving (89-92) **Unit 2:** Lesson 6, Building Number Concepts (151-154)	

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	(943-945); Lesson 15, Building Number Concepts (950-954) **Unit 9:** Lesson 1, Building Number Concepts (971-975); Lesson 2, Building Number Concepts (981-984)		
CCSS.Math.Content.3.NF.A.2 Understand a fraction as a number on the number line; represent fractions on a number line diagram.	**Unit 8:** Lesson 1, Building Number Concepts (837-841); Lesson 2, Building Number Concepts (847-849); Lesson 9, Building Number Concepts (905-907); Lesson 14, Building Number Concepts (943-945); Lesson 15, Building Number Concepts (950-954)	**Unit 1:** Lesson 1, Building Number Concepts (9-11); Lesson 1, Problem Solving (12-13); Lesson 2, Problem Solving (19-20); Lesson 3, Problem Solving (27-29); Lesson 4, Problem Solving (35-37); Lesson 6, Problem Solving (51-53); Lesson 7, Problem Solving (59-62); Lesson 8, Problem Solving (68-69); Lesson 9, Problem Solving (76-78); Lesson 10, Building Number Concepts (81-88); Lesson 10, Problem Solving (89-92) **Unit 2:** Lesson 1, Building Number Concepts (107-108); Lesson 1, Problem Solving (109-112); Lesson 2, Building Number Concepts (115-117); Lesson 2, Problem Solving (118-120); Lesson 3, Building Number Concepts (123-127); Lesson 3, Problem Solving (128-129); Lesson 4, Building Number Concepts (133-135); Lesson 4, Problem Solving (136-138); Lesson 5, Building Number Concepts (141-145); Lesson 15, Problem Solving (240-243) **Unit 3:** Lesson 1, Building Number Concepts (255-259) **Unit 5:** Lesson 1, Building Number Concepts (495-499); Lesson 9, Building Number Concepts (563-568); Lesson 13, Building Number Concepts (597-601)	
CCSS.Math.Content.3.NF.A.2a Represent a fraction 1/b on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b on the number line.	**Unit 8:** Lesson 1, Building Number Concepts (837-841); Lesson 2, Building Number Concepts (847-849); Lesson 15, Building Number Concepts (950-954)	**Unit 1:** Lesson 1, Building Number Concepts (9-11); Lesson 8, Problem Solving (68-69); Lesson 10, Problem Solving (89-92) **Unit 2:** Lesson 2, Problem Solving (118-120); Lesson 3, Problem Solving (128-129); Lesson 4, Problem Solving (136-138)	

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CCSS.Math.Content.3.NF.A.2b Represent a fraction a/b on a number line diagram by marking off a lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.	**Unit 8:** Lesson 2, Building Number Concepts (847-849); Lesson 15, Building Number Concepts (950-954) **Unit 9:** Lesson 7, Building Number Concepts (1020-1022)	**Unit 1:** Lesson 1, Building Number Concepts (9-11); Lesson 8, Problem Solving (68-69); Lesson 10, Problem Solving (89-92) **Unit 2:** Lesson 2, Problem Solving (118-120); Lesson 3, Problem Solving (128-129); Lesson 4, Problem Solving (136-138)	
CCSS.Math.Content.3.NF.A.3 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.	**Unit 8:** Lesson 12, Building Number Concepts (928-931); Lesson 13, Building Number Concepts (936-940); Lesson 14, Building Number Concepts (943-945); Lesson 15, Building Number Concepts (950-954)	**Unit 2:** Lesson 1, Building Number Concepts (107-108); Lesson 2, Building Number Concepts (115-117); Lesson 3, Building Number Concepts (123-127); Lesson 4, Building Number Concepts (133-135); Lesson 5, Building Number Concepts (141-145); Lesson 7, Building Number Concepts (160-163); Lesson 15, Building Number Concepts (232-239)	
CCSS.Math.Content.3.NF.A.3a Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.	**Unit 8:** Lesson 3, Building Number Concepts (854-857); Lesson 4, Building Number Concepts (864-868); Lesson 6, Building Number Concepts (881-884); Lesson 7, Building Number Concepts (890-892); Lesson 9, Building Number Concepts (905-907); Lesson 14, Building Number Concepts (943-945); Lesson 15, Building Number Concepts (950-954)	**Unit 2:** Lesson 7, Problem Solving (164-166)	
CCSS.Math.Content.3.NF.A.3b Recognize and generate simple equivalent fractions, e.g., 1/2 =2/4, 4/6 = 2/3. Explain why the fractions are equivalent, e.g., by using a visual fraction model.	**Unit 8:** Lesson 12, Building Number Concepts (928-931); Lesson 13, Building Number Concepts (936-940); Lesson 14, Building Number Concepts (943-945); Lesson 15, Building Number Concepts (950-954)	**Unit 2:** Lesson 7, Problem Solving (164-166) **Unit 3:** Lesson 7, Building Number Concepts (307-310)	
CCSS.Math.Content.3.NF.A.3c Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form 3 = 3/1; recognize that 6/1 = 6; locate 4/4 and 1 at the same point of a number line diagram.	**Unit 8:** Lesson 6, Building Number Concepts (881-884); Lesson 7, Building Number Concepts (890-892); Lesson 9, Building Number Concepts (905-907)	**Unit 2:** Lesson 4, Building Number Concepts (133-135); Lesson 5, Building Number Concepts (141-145) **Unit 3:** Lesson 1, Building Number Concepts (255-259) **Unit 4:** Lesson 5, Building Number Concepts (438-440)	
CCSS.Math.Content.3.NF.A.3d Compare two fractions with the same numerator or the same denominator by reasoning about their size.	**Unit 8:** Lesson 10, Building Number Concepts (913-915)	**Unit 2:** Lesson 2, Problem Solving (118-120)	

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Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.			
CCSS.Math.Content.3.OA.A.1 Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5 × 7.	**Unit 4:** Lesson 1, Building Number Concepts (383-385); Lesson 2, Building Number Concepts (391-394); Lesson 2, Problem Solving (395-397); Lesson 3, Building Number Concepts (400-402); Lesson 3, Problem Solving (403-404); Lesson 4, Building Number Concepts (407-409); Lesson 4, Problem Solving (410-411); Lesson 5, Problem Solving (414-417); Lesson 6, Problem Solving (426-427); Lesson 7, Problem Solving (432-435); Lesson 11, Problem Solving (465-467); Lesson 12, Problem Solving (470-473); Lesson 13, Problem Solving (481-483) **Unit 5:** Lesson 1, Building Number Concepts (515-518); Lesson 3, Building Number Concepts (530-532); Lesson 4, Building Number Concepts (538-541); Lesson 5, Building Number Concepts (546-550); Lesson 6, Building Number Concepts (555-557); Lesson 7, Building Number Concepts (564-567); Lesson 8, Building Number Concepts (572-574); Lesson 12, Building Number Concepts (602-605); Lesson 13, Building Number Concepts (611-613); Lesson 14, Building Number Concepts (618-620); Lesson 15, Building Number Concepts (625-628)		
CCSS.Math.Content.3.OA.A.2 Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe	**Unit 4:** Lesson 1, Building Number Concepts (383-385); Lesson 2, Building Number Concepts (391-394); Lesson 2, Problem Solving (395-397); Lesson 3, Building Number Concepts (400-402); Lesson 3, Problem Solving (403-404); Lesson 4, Building Number Concepts (407-409); Lesson 4, Problem Solving (410-411); Lesson 5, Problem Solving		

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a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.	(414-417); Lesson 6, Building Number Concepts (422-425); Lesson 6, Problem Solving (426-427); Lesson 7, Building Number Concepts (430-431); Lesson 7, Problem Solving (432-435); Lesson 8, Building Number Concepts (438-440); Lesson 8, Problem Solving (441-443); Lesson 9, Building Number Concepts (445-448); Lesson 9, Problem Solving (449-451); Lesson 10, Building Number Concepts (454-457); Lesson 11, Building Number Concepts (462-464); Lesson 11, Problem Solving (465-467); Lesson 12, Problem Solving (470-473); Lesson 13, Problem Solving (481-483); Lesson 15, Building Number Concepts (494-500) **Unit 5:** Lesson 11, Building Number Concepts (593-597); Lesson 12, Building Number Concepts (602-605); Lesson 13, Building Number Concepts (611-613); Lesson 14, Building Number Concepts (618-620); Lesson 15, Building Number Concepts (625-628)		
CCSS.Math.Content.3.OA.A.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	**Unit 4:** Lesson 14, Problem Solving (489-491); Lesson 15, Problem Solving (501-503)		
CCSS.Math.Content.3.OA.A.4 Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations 8 × ? = 48, 5 = **□** ÷ 3, 6 × 6 = ?.	**Unit 4:** Lesson 1, Building Number Concepts (383-385)		
CCSS.Math.Content.3.OA.B.5 Apply properties of operations as strategies to multiply and divide.2 Examples: If 6 × 4 = 24 is known, then 4 × 6 = 24 is also known. (Commutative property of multiplication.) 3 × 5 × 2 can be found by 3 ×	**Unit 3:** Lesson 1, Building Number Concepts (253-255); Lesson 2, Building Number Concepts (262-264); Lesson 3, Building Number Concepts (270-272); Lesson 4, Building Number Concepts (278-280)		

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5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 = 30. (Associative property of multiplication.) Knowing that 8 × 5 = 40 and 8 × 2 = 16, one can find 8 × 7 as 8 × (5 + 2) = (8 × 5) + (8 × 2) = 40 + 16 = 56. (Distributive property.)	**Unit 4:** Lesson 3, Problem Solving (403-404); Lesson 4, Problem Solving (410-411); Lesson 5, Problem Solving (414-417); Lesson 6, Problem Solving (426-427); Lesson 7, Problem Solving (432-435); Lesson 11, Problem Solving (465-467); Lesson 12, Problem Solving (470-473); Lesson 13, Problem Solving (481-483); Lesson 14, Problem Solving (489-491); Lesson 15, Problem Solving (501-503)		
CCSS.Math.Content.3.OA.C Multiply and divide within 100.	**Unit 5:** Lesson 14, Building Number Concepts (618-620); Lesson 15, Building Number Concepts (625-628)		
CCSS.Math.Content.3.OA.C.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	**Unit 3:** Lesson 1, Building Number Concepts (253-255); Lesson 2, Building Number Concepts (262-264); Lesson 2, Problem Solving (265-267); Lesson 3, Building Number Concepts (270-272); Lesson 4, Building Number Concepts (278-280) **Unit 4:** Lesson 1, Building Number Concepts (383-385); Lesson 2, Building Number Concepts (391-394); Lesson 3, Building Number Concepts (400-402); Lesson 4, Building Number Concepts (407-409); Lesson 6, Building Number Concepts (422-425); Lesson 7, Building Number Concepts (430-431); Lesson 8, Building Number Concepts (438-440); Lesson 9, Building Number Concepts (445-448); Lesson 10, Building Number Concepts (454-457); Lesson 11, Building Number Concepts (462-464); Lesson 13, Building Number Concepts (476-480); Lesson 13, Problem Solving (481-483); Lesson 15, Building Number Concepts (494-500) **Unit 5:** Lesson 1, Building Number Concepts (515-518); Lesson 3, Building Number Concepts (530-532); Lesson 4, Building Number Concepts (538-541); Lesson 10, Building Number Concepts (586-588); Lesson 11, Building Number Concepts (593-597);		

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	Lesson 12, Building Number Concepts (602-605); Lesson 13, Building Number Concepts (611-613); Lesson 14, Building Number Concepts (618-620); Lesson 15, Building Number Concepts (625-628) **Unit 7:** Lesson 1, Building Number Concepts (743-746)		

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CCSS.Math.Content.4.G.A Draw and identify lines and angles, and classify shapes by properties of their lines and angles.			**Unit 7:** Lesson 1, Problem Solving (755-760); Lesson 2, Problem Solving (766-769); Lesson 4, Problem Solving (786-790); Lesson 5, Problem Solving (793-796); Lesson 6, Problem Solving (805-808)
CCSS.Math.Content.4.G.A.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse); and perpendicular and parallel lines. Identify these in two-dimensional figures.		**Unit 3:** Lesson 1, Problem Solving (260-262); Lesson 4, Problem Solving (283-285); Lesson 6, Building Number Concepts (297-301); Lesson 6, Problem Solving (302-304) **Unit 4:** Lesson 7, Problem Solving (457-459); Lesson 8, Problem Solving (464-465); Lesson 10, Problem Solving (478-482) **Unit 5:** Lesson 1, Problem Solving (500-501); Lesson 2, Problem Solving (508-510); Lesson 3, Problem Solving (518-519); Lesson 4, Problem Solving (525-526)	**Unit 7:** Lesson 1, Problem Solving (755-760); Lesson 2, Problem Solving (766-769); Lesson 4, Problem Solving (786-790); Lesson 5, Problem Solving (793-796); Lesson 6, Problem Solving (805-808)
CCSS.Math.Content.4.G.A.2 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.	**Unit 6:** Lesson 2, Problem Solving (659-661); Lesson 3, Problem Solving (668-670) **Unit 7:** Lesson 1, Problem Solving (747-749); Lesson 2, Problem Solving (756-757)	**Unit 3:** Lesson 12, Building Number Concepts (350-354); Lesson 13, Problem Solving (365-366); Lesson 15, Problem Solving (382-385) **Unit 5:** Lesson 1, Problem Solving (500-501); Lesson 2, Problem Solving (508-510); Lesson 3, Problem Solving (518-519); Lesson 4, Problem Solving (525-526); Lesson 6,	

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		Problem Solving (541-542); Lesson 7, Problem Solving (550-551; Lesson 8, Problem Solving (558-560); Lesson 9, Problem Solving (569-570); Lesson 12, Problem Solving (594-595); Lesson 13, Problem Solving (602-603); Lesson 14, Problem Solving (612-613); Lesson 15, Problem Solving (621-627)	
CCSS.Math.Content.4.G.A.3 Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.	**Unit 7:** Lesson 4, Problem Solving (770-772); Lesson 6, Problem Solving (785-787); Lesson 7, Problem Solving (790-793); Lesson 8, Problem Solving (799-803); Lesson 9, Problem Solving (810-812); Lesson 10, Problem Solving (821-824)	**Unit 8:** Lesson 15, Problem Solving (983-987)	
CCSS.Math.Content.4.MD.A.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12); (2, 24); (3, 36); ...	**Unit 3:** Lesson 1, Problem Solving (256-259); Lesson 2, Problem Solving (265-267); Lesson 3, Problem Solving (273-275); Lesson 15, Problem Solving (364-369) **Unit 9:** Lesson 1, Problem Solving (976-978); Lesson 2, Problem Solving (985-986); Lesson 3, Problem Solving (991-994); Lesson 4, Problem Solving (1001-1002); Lesson 5, Problem Solving (1005-1007; Lesson 6, Problem Solving (1016-1017); Lesson 9, Problem Solving (1036-1038); Lesson 10, Problem Solving (1045-1047)		
CCSS.Math.Content.4.MD.A.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	**Unit 3:** Lesson 4, Problem Solving (281-282); Lesson 6, Problem Solving (297-298) **Unit 9:** Lesson 1, Problem Solving (976-978); Lesson 2, Problem Solving (985-986); Lesson 3, Problem Solving (991-994); Lesson 4, Problem Solving (1001-1002); Lesson 5, Problem Solving (1005-1007); Lesson 6, Problem Solving (1016-1017); Lesson 9, Problem Solving (1036-1038); Lesson 10, Problem Solving (1045-1047)		
CCSS.Math.Content.4.MD.A.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems. For	**Unit 5:** Lesson 2, Problem Solving (523-527); Lesson 6, Problem Solving (558-561); Lesson 7, Problem Solving (568-569); Lesson 8,	**Unit 6:** Lesson 1, Problem Solving (644-646); Lesson 2, Problem Solving (653-654)	**Unit 1:** Lesson 14, Problem Solving (141-142)

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example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.	Problem Solving (575-576); Lesson 9, Problem Solving (579-583); Lesson 11, Problem Solving (598-599); Lesson 12, Problem Solving (606-608); Lesson 13, Problem Solving (614-615); Lesson 15, Problem Solving (629-632)		
CCSS.Math.Content.4.MD.C.5 Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:		**Unit 3:** Lesson 4, Problem Solving (283-285); Lesson 6, Building Number Concepts (297-301); Lesson 6, Problem Solving (302-304); Lesson 7, Problem Solving (311-314)	
CCSS.Math.Content.4.MD.C.5a An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a "one-degree angle," and can be used to measure angles.		**Unit 3:** Lesson 7, Problem Solving (311-314)	
CCSS.Math.Content.4.MD.C.5b An angle that turns through n one-degree angles is said to have an angle measure of n degrees.		**Unit 3:** Lesson 7, Problem Solving (311-314)	
CCSS.Math.Content.4.MD.C.6 Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.		**Unit 3:** Lesson 4, Problem Solving (283-285); Lesson 6, Building Number Concepts (297-301); Lesson 6, Problem Solving (302-304); Lesson 7, Problem Solving (311-314); Lesson 12, Building Number Concepts (350-354); Lesson 12, Problem Solving (355-357); 13, Problem Solving (365-366); Lesson 15, Problem Solving (382-385) **Unit 4:** Lesson 3, Problem Solving (423-425); Lesson 4, Problem Solving (432-435); Lesson 7, Problem Solving (457-459); Lesson 8, Problem Solving (464-465); Lesson 10, Problem Solving (478-482) **Unit 5:** Lesson 1, Problem Solving (500-501); Lesson 2, Problem Solving (508-510); Lesson 7, Problem Solving (550-551); Lesson 9, Problem Solving (569-570)	

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CCSS.Math.Content.4.MD.C.7 Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.		**Unit 3:** Lesson 7, Problem Solving (311-314); Lesson 8, Problem Solving (322-324**)**; Lesson 12, Building Number Concepts (350-354); Lesson 12, Problem Solving (355-357)	
CCSS.Math.Content.4.NBT.A.1 Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. For example, recognize that 700 ÷ 70 = 10 by applying concepts of place value and division.	**Unit 1:** Lesson 1, Building Number Concepts (9-13); Lesson 2, Building Number Concepts (18-21); Lesson 3, Building Number Concepts (27-29); Lesson 15, Building Number Concepts (113-115)		
CCSS.Math.Content.4.NBT.A.2 Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.	**Unit 1:** Lesson 1, Building Number Concepts (9-13); Lesson 2, Building Number Concepts (18-21); Lesson 3, Building Number Concepts (27-29); Lesson 4, Building Number Concepts (34-35); Lesson 6, Building Number Concepts (47-49); Lesson 7, Building Number Concepts (54-57); Lesson 9, Building Number Concepts (69-72); Lesson 12, Building Number Concepts (95-97); Lesson 13, Building Number Concepts (102-103); Lesson 15, Building Number Concepts (113-115)		
CCSS.Math.Content.4.NBT.A.3 Use place value understanding to round multi-digit whole numbers to any place.	**Unit 1:** Lesson 11, Building Number Concepts (87-90); Lesson 11, Problem Solving (91-92); Lesson 12, Problem Solving (98-99); Lesson 15, Building Number Concepts (113-115) **Unit 2:** Lesson 7, Problem Solving (181-182); Lesson 8, Problem Solving (188-189); Lesson 9, Problem Solving (194-195); Lesson 13, Problem Solving (224-225) **Unit 3:** Lesson 8, Building Number Concepts (309-312); Lesson 10, Building Number Concepts (326-328); Lesson 11, Building Number Concepts (334-336); Lesson 15, Building Number Concepts (360-363)		

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	Unit 4: Lesson 15, Building Number Concepts (494-500)		
CCSS.Math.Content.4.NBT.B.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.	**Unit 1:** Lesson 8, Building Number Concepts (62-64); Lesson 9, Building Number Concepts (69-72); Lesson 11, Building Number Concepts (87-90); Lesson 12, Building Number Concepts (95-97); Lesson 13, Building Number Concepts (102-103); Lesson 15, Building Number Concepts (113-115) **Unit 2:** Lesson 11, Problem Solving (209-210); Lesson 12, Problem Solving (217-218); Lesson 14, Problem Solving (231-232); Lesson 15, Problem Solving (239-240)	**Unit 4:** Lesson 9, Building Number Concepts (468-470); Lesson 9, Problem Solving (471-472)	
CCSS.Math.Content.4.NBT.B.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	**Unit 3:** Lesson 2, Problem Solving (265-267); Lesson 4, Problem Solving (281-282); Lesson 5, Building Number Concepts (285-288); Lesson 6, Building Number Concepts (293-296); Lesson 7, Building Number Concepts (301-304); Lesson 7, Problem Solving (305-306); Lesson 8, Building Number Concepts (309-312); Lesson 8, Problem Solving (313-315); Lesson 9, Building Number Concepts (318-320); Lesson 9, Problem Solving (321-323); Lesson 10, Building Number Concepts (326-328); Lesson 11, Building Number Concepts (334-336); Lesson 11, Problem Solving (337-338); Lesson 15, Building Number Concepts (360-363)	**Unit 4:** Lesson 9, Building Number Concepts (468-470); Lesson 9, Problem Solving (471-472)	
CCSS.Math.Content.4.NBT.B.6 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	**Unit 4:** Lesson 6, Building Number Concepts (422-425); Lesson 6, Problem Solving (426-427); Lesson 7, Building Number Concepts (430-431); Lesson 7, Problem Solving (432-435); Lesson 8, Building Number Concepts (438-440); Lesson 8, Problem Solving (441-443); Lesson 9, Building Number Concepts (445-448); Lesson 9, Problem Solving (449-451); Lesson 10, Building Number Concepts (454-457); Lesson 11, Building Number	**Unit 4:** Lesson 9, Building Number Concepts (468-470)	

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	Concepts (462-464); Lesson 11, Problem Solving (465-467); Lesson 12, Problem Solving (470-473); Lesson 13, Building Number Concepts (476-480); Lesson 13, Problem Solving (481-483); Lesson 14, Problem Solving (489-491); Lesson 15, Building Number Concepts (494-500); Lesson 15, Problem Solving (501-503)		
CCSS.Math.Content.4.NF.A Extend understanding of fraction equivalence and ordering.		**Unit 2:** Lesson 7, Building Number Concepts (160-163); Lesson 8, Building Number Concepts (169-174); Lesson 9, Building Number Concepts (180-184); Lesson 10, Building Number Concepts (189-193); Lesson 11, Building Number Concepts (198-201); Lesson 12, Building Number Concepts (207-210); Lesson 13, Building Number Concepts (215-219) **Unit 5:** Lesson 7, Building Number Concepts (545-549)	
CCSS.Math.Content.4.NF.A.1 Explain why a fraction a/b is equivalent to a fraction (n × a)/(n × b) by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.	**Unit 9:** Lesson 6, Building Number Concepts (1012-1015); Lesson 8, Building Number Concepts (1028-1031); Lesson 10, Building Number Concepts (1041-1044)	**Unit 2:** Lesson 7, Building Number Concepts (160-163); Lesson 8, Building Number Concepts (169-174); Lesson 9, Building Number Concepts (180-184); Lesson 10, Building Number Concepts (189-193); Lesson 11, Building Number Concepts (198-201); Lesson 12, Building Number Concepts (207-210); Lesson 13, Building Number Concepts (215-219); Lesson 15, Building Number Concepts (232-239); Lesson 15, Problem Solving (240-243) **Unit 3:** Lesson 5, Building Number Concepts (288-292); Lesson 7, Building Number Concepts (307-310)	**Unit 1:** Lesson 2, Building Number Concepts (20-27)
CCSS.Math.Content.4.NF.A.2 Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as 1/2. Recognize that comparisons are valid only	**Unit 8:** Lesson 6, Building Number Concepts (881-884); Lesson 7, Building Number Concepts (890-892); Lesson 10, Building Number Concepts (913-915)	**Unit 2:** Lesson 2, Building Number Concepts (115-117); Lesson 2, Problem Solving (118-120); Lesson 3, Building Number Concepts (123-127); Lesson 3, Problem Solving (128-129); Lesson 4, Building Number Concepts (133-135); Lesson 4, Problem Solving (136-	

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when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.		138); Lesson 5, Building Number Concepts (141-145); Lesson 6, Building Number Concepts (151-154); Lesson 15, Building Number Concepts (232-239); Lesson 15, Problem Solving (240-243)	
CCSS.Math.Content.4.NF.B.3 Understand a fraction a/b with a > 1 as a sum of fractions 1/b.		**Unit 1:** Lesson 5, Building Number Concepts (40-43); Lesson 6, Problem Solving (51-53); Lesson 7, Building Number Concepts (56-58); Lesson 7, Problem Solving (59-62); Lesson 8, Building Number Concepts (65-67); Lesson 8, Problem Solving (68-69); Lesson 9, Building Number Concepts (72-75); Lesson 9, Problem Solving (76-78); Lesson 10, Building Number Concepts (81-88); Lesson 10, Problem Solving (89-92) **Unit 2:** Lesson 4, Problem Solving (136-138) **Unit 3:** Lesson 11, Building Number Concepts (342-345) **Unit 4:** Lesson 5, Building Number Concepts (438-440)	
CCSS.Math.Content.4.NF.B.3a Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.	**Unit 9:** Lesson 1, Building Number Concepts (971-975); Lesson 2, Building Number Concepts (981-984); Lesson 3, Building Number Concepts (989-990); Lesson 4, Building Number Concepts (997-1000); Lesson 6, Building Number Concepts (1012-1015); Lesson 8, Building Number Concepts (1028-1031); Lesson 10, Building Number Concepts (1041-1044)		**Unit 1:** Lesson 1, Building Number Concepts (9-13)
CCSS.Math.Content.4.NF.B.3b Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. Examples: 3/8 = 1/8 + 1/8 + 1/8 ; 3/8 = 1/8 + 2/8 ; 2 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8.		**Unit 1:** Lesson 9, Problem Solving (76-78); Lesson 10, Problem Solving (89-92)	

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CCSS.Math.Content.4.NF.B.3c Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.	**Unit 9:** Lesson 2, Building Number Concepts (981-984)	**Unit 2:** Lesson 11, Problem Solving (202-204) **Unit 4:** Lesson 1, Building Number Concepts (397-401); Lesson 1, Problem Solving (402-403)	
CCSS.Math.Content.4.NF.B.3d Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.	**Unit 9:** Lesson 1, Building Number Concepts (971-975); Lesson 2, Building Number Concepts (981-984)	**Unit 2:** Lesson 6, Problem Solving (155-157); Lesson 11, Problem Solving (202-204) **Unit 4:** Lesson 1, Problem Solving (402-403)	**Unit 1:** Lesson 1, Building Number Concepts (9-13)
CCSS.Math.Content.4.NF.B.4 Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.		**Unit 1:** Lesson 3, Building Number Concepts (23-26); Lesson 5, Building Number Concepts (40-43); Lesson 7, Building Number Concepts (56-58); Lesson 8, Building Number Concepts (65-67); Lesson 9, Building Number Concepts (72-75); Lesson 10, Building Number Concepts (81-88) **Unit 3:** Lesson 1, Building Number Concepts (255-259)	
CCSS.Math.Content.4.NF.B.4b Understand a multiple of a/b as a multiple of 1/b, and use this understanding to multiply a fraction by a whole number. For example, use a visual fraction model to express 3 × (2/5) as 6 × (1/5); recognizing this product as 6/5. (In general, n × (a/b) = (n × a)/b.)		**Unit 1:** Lesson 7, Problem Solving (59-62); Lesson 8, Problem Solving (68-69)	
CCSS.Math.Content.4.NF.B.4c Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. For example, if each person at a party will eat 3/8 of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?		**Unit 3:** Lesson 2, Building Number Concepts (265-267); Lesson 3, Building Number Concepts (272-275); Lesson 3, Problem Solving (276-277)	
CCSS.Math.Content.4.NF.C.5 Express a fraction with denominator 10 as an equivalent fraction		**Unit 5:** Lesson 2, Building Number Concepts (504-507); Lesson 3, Building Number	

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with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.4 For example, express 3/10 as 30/100, and add 3/10 + 4/100 = 34/100.		Concepts (513-517); Lesson 4, Building Number Concepts (522-524); Lesson 5, Building Number Concepts (529-533); Lesson 6, Building Number Concepts (538-540); Lesson 7, Building Number Concepts (545-549); Lesson 8, Building Number Concepts (554-557) **Unit 7:** Lesson 2, Building Number Concepts (780-782); Lesson 5, Building Number Concepts (810-814); Lesson 10, Building Number Concepts (844-847)	
CCSS.Math.Content.4.NF.C.6 Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as 62/100; describe a length as 0.62 meters; locate 0.62 on a number line diagram.	**Unit 8:** Lesson 1, Building Number Concepts (837-841); Lesson 2, Building Number Concepts (847-849); Lesson 7, Building Number Concepts (890-892); Lesson 9, Building Number Concepts (905-907); Lesson 15, Building Number Concepts (950-954)	**Unit 5:** Lesson 2, Building Number Concepts (504-507); Lesson 3, Building Number Concepts (513-517); Lesson 4, Building Number Concepts (522-524); Lesson 5, Building Number Concepts (529-533); Lesson 6, Building Number Concepts (538-540); Lesson 7, Building Number Concepts (545-549); Lesson 8, Building Number Concepts (554-557) **Unit 7:** Lesson 1, Problem Solving (773-777)	
CCSS.Math.Content.4.NF.C.7 Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual model.	**Unit 8:** Lesson 2, Building Number Concepts (847-849)	**Unit 5:** Lesson 1, Building Number Concepts (495-499); Lesson 6, Building Number Concepts (538-540)	
CCSS.Math.Content.4.OA.A.2 Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.[1]	**Unit 4:** Lesson 14, Problem Solving (489-491)		
CCSS.Math.Content.4.OA.B.4 Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given	**Unit 5:** Lesson 1, Building Number Concepts (515-518); Lesson 3, Building Number Concepts (530-532); Lesson 4, Building Number Concepts (538-541); Lesson 5,	**Unit 2:** Lesson 12, Building Number Concepts (207-210); Lesson 13, Building Number Concepts (215-219)	

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whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite	Building Number Concepts (546-550); Lesson 6, Building Number Concepts (555-557); Lesson 7, Building Number Concepts (564-567); Lesson 8, Building Number Concepts (572-574); Lesson 10, Building Number Concepts (586-588); Lesson 14, Building Number Concepts (618-620); Lesson 15, Building Number Concepts (625-628) **Unit 6:** Lesson 1, Building Number Concepts (645-648); Lesson 2, Building Number Concepts (654-658); Lesson 4, Building Number Concepts (673-676); Lesson 5, Building Number Concepts (681-683); Lesson 6, Building Number Concepts (687-691); Lesson 10, Building Number Concepts (722-726) **Unit 7:** Lesson 2, Building Number Concepts (752-755); Lesson 3, Building Number Concepts (760-762); Lesson 4, Building Number Concepts (767-769); Lesson 5, Building Number Concepts (775-777); Lesson 6, Building Number Concepts (782-784); Lesson 9, Building Number Concepts (806-809); Lesson 10, Building Number Concepts (815-820)	**Unit 3:** Lesson 5, Building Number Concepts (288-292) **Unit 9:** Lesson 9, Building Number Concepts (1062-1065)	
CCSS.Math.Content.4.OA.C.5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule “Add 3” and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.	**Unit 7:** Lesson 1, Building Number Concepts (743-746); Lesson 9, Building Number Concepts (806-809); Lesson 10, Building Number Concepts (815-820)		

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CCSS.Math.Content.5.G.A.1 Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate).		**Unit 8:** Lesson 8, Problem Solving (923-925); Lesson 10, Problem Solving (934-939); Lesson 11, Problem Solving (944-950) **Unit 9:** Lesson 1, Problem Solving (1004-1006); Lesson 2, Problem Solving (1014-1016)	
CCSS.Math.Content.5.G.A.2 Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.		**Unit 8:** Lesson 10, Problem Solving (934-939); Lesson 11, Problem Solving (944-950)	
CCSS.Math.Content.5.G.B.3 Understand that attributes belonging to a category of two dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.		**Unit 5:** Lesson 14, Problem Solving (612-613); Lesson 15, Problem Solving (621-627)	
CCSS.Math.Content.5.G.B.4 Classify two-dimensional figures in a hierarchy based on properties.		**Unit 5:** Lesson 14, Problem Solving (612-613); Lesson 15, Problem Solving (621-627)	
CCSS.Math.Content.5.MD.A.1 Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m); and use these conversions in solving multi-step, real world problems.	**Unit 3:** Lesson 2, Problem Solving (265-267); Lesson 3, Problem Solving (273-275) **Unit 4:** Lesson 1, Problem Solving (386-388)		

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CCSS.Math.Content.5.MD.C.3b A solid figure which can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units.			
CCSS.Math.Content.5.NBT.A.1 Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.		**Unit 5:** Lesson 4, Building Number Concepts (522-524)	
CCSS.Math.Content.5.NBT.A.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.	**Unit 3:** Lesson 3, Building Number Concepts (270-272); Lesson 15, Building Number Concepts (360-363) **Unit 7:** Lesson 2, Building Number Concepts (752-755); Lesson 3, Building Number Concepts (760-762); Lesson 4, Building Number Concepts (767-769)		
CCSS.Math.Content.5.NBT.A.3 Read, write, and compare decimals to thousandths.	**Unit 8:** Lesson 1, Building Number Concepts (837-841); Lesson 2, Building Number Concepts (847-849)		**Unit 1:** Lesson 10, Building Number Concepts (104-107)
CCSS.Math.Content.5.NBT.A.3b Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.		**Unit 5:** Lesson 11, Building Number Concepts (581-586); Lesson 13, Building Number Concepts (597-601); Lesson 14, Building Number Concepts (606-611)	
CCSS.Math.Content.5.NBT.A.4 Use place value understanding to round decimals to any place.	**Unit 4:** Lesson 13, Building Number Concepts (476-480); Lesson 15, Building Number Concepts (494-500)	**Unit 5:** Lesson 12, Building Number Concepts (589-593); Lesson 15, Building Number Concepts (616-620) **Unit 6:** Lesson 2, Building Number Concepts (649-652); Lesson 3, Building Number Concepts (657-660); Lesson 8, Building Number Concepts (692-694); Lesson 13, Building Number Concepts (733-735); Lesson 14, Building Number Concepts (740-744); Lesson 15, Building Number Concepts (747-751)	**Unit 1:** Lesson 8, Building Number Concepts (83-87)
CCSS.Math.Content.5.NBT.B.5 Fluently multiply multi-digit whole numbers using the standard algorithm.	**Unit 3:** Lesson 15, Building Number Concepts (360-363)		

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CCSS.Math.Content.5.NBT.B.6 Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	**Unit 4:** Lesson 6, Problem Solving (426-427)		
CCSS.Math.Content.5.NBT.B.7 Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.		**Unit 6:** Lesson 1, Building Number Concepts (639-643); Lesson 6, Building Number Concepts (678-681); Lesson 7, Building Number Concepts (687-689); Lesson 11, Building Number Concepts (716-719)	**Unit 1:** Lesson 9, Building Number Concepts (95-97); Lesson 11, Building Number Concepts (112-114); Lesson 12, Building Number Concepts (120-123); Lesson 13, Building Number Concepts (128-131); Lesson 14, Building Number Concepts (138-140); Lesson 15, Building Number Concepts (145-152)
CCSS.Math.Content.5.NF.A.1 Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. For example, 2/3 + 5/4 = 8/12 + 15/12 = 23/12. (In general, a/b + c/d = (ad + bc)/bd.)	**Unit 9:** Lesson 4, Building Number Concepts (997-1000); Lesson 6, Building Number Concepts (1012-1015); Lesson 8, Building Number Concepts (1028-1031); Lesson 8, Problem Solving (1032-1033); Lesson 9, Problem Solving (1036-1038); Lesson 10, Building Number Concepts (1041-1044)	**Unit 2:** Lesson 8, Building Number Concepts (169-174); Lesson 9, Building Number Concepts (180-184); Lesson 10, Building Number Concepts (189-193); Lesson 11, Building Number Concepts (198-201); Lesson 12, Building Number Concepts (207-210); Lesson 12, Problem Solving (211-212); Lesson 13, Building Number Concepts (215-219); Lesson 13, Problem Solving (220-221); Lesson 14, Building Number Concepts (224-227); Lesson 14, Problem Solving (228-229); Lesson 15, Building Number Concepts (232-239); Lesson 15, Problem Solving (240-243) **Unit 4:** Lesson 2, Building Number Concepts (406-411); Lesson 2, Problem Solving (412-413); Lesson 3, Building Number Concepts (416-422); Lesson 4, Building Number Concepts (428-431); Lesson 8, Building Number Concepts (462-463); Lesson 9, Problem Solving (471-472); Lesson 10, Building Number Concepts (475-477)	**Unit 1:** Lesson 2, Building Number Concepts (20-27); Lesson 6, Building Number Concepts (60-63)

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CCSS.Math.Content.5.NF.A.2 Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. For example, recognize an incorrect result 2/5 + 1/2 = 3/7, by observing that 3/7 < 1/2.	**Unit 9:** Lesson 4, Building Number Concepts (997-1000); Lesson 6, Building Number Concepts (1012-1015); Lesson 8, Building Number Concepts (1028-1031); Lesson 9, Problem Solving (1036-1038); Lesson 10, Building Number Concepts (1041-1044)	**Unit 2:** Lesson 8, Problem Solving (175-177); Lesson 9, Problem Solving (185-186); Lesson 12, Problem Solving (211-212); Lesson 13, Problem Solving (220-221); Lesson 14, Problem Solving (228-229); Lesson 15, Problem Solving (240-243) **Unit 3:** Lesson 14, Problem Solving (372-374) **Unit 4:** Lesson 2, Problem Solving (412-413); Lesson 9, Building Number Concepts (468-470); Lesson 9, Problem Solving (471-472)	
CCSS.Math.Content.5.NF.B Apply and extend previous understandings of multiplication and division to multiply and divide fractions.			**Unit 1:** Lesson 3, Building Number Concepts (30-32); Lesson 4, Building Number Concepts (41-44)
CCSS.Math.Content.5.NF.B.3 Interpret a fraction as division of the numerator by the denominator (a/b = a ÷ b). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. For example, interpret 3/4 as the result of dividing 3 by 4, noting that 3/4 multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size 3/4. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?		**Unit 3:** Lesson 11, Building Number Concepts (342-345) **Unit 5:** Lesson 9, Building Number Concepts (563-568); Lesson 10, Building Number Concepts (573-576); Lesson 14, Building Number Concepts (606-611); Lesson 15, Building Number Concepts (616-620) **Unit 7:** Lesson 1, Problem Solving (773-777); Lesson 2, Building Number Concepts (780-782); Lesson 5, Building Number Concepts (810-814); Lesson 10, Building Number Concepts (844-847)	
CCSS.Math.Content.5.NF.B.4 Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.	**Unit 9:** Lesson 6, Building Number Concepts (1012-1015); Lesson 8, Building Number Concepts (1028-1031); Lesson 10, Building Number Concepts (1041-1044)	**Unit 3:** Lesson 4, Building Number Concepts (280-282); Lesson 7, Building Number Concepts (307-310); Lesson 13, Building Number Concepts (360-364); Lesson 14, Building Number Concepts (369-371); Lesson 15, Building Number Concepts (376-381) **Unit 4:** Lesson 6, Building Number Concepts (445-448); Lesson 6, Problem Solving (449-450); Lesson 8, Building Number Concepts	**Unit 1:** Lesson 6, Building Number Concepts (60-63)

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		(462-463); Lesson 10, Building Number Concepts (475-477)	
CCSS.Math.Content.5.NF.B.4b Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.		**Unit 3:** Lesson 3, Building Number Concepts (272-275); Lesson 3, Problem Solving (276-277)	
CCSS.Math.Content.5.NF.B.5a Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.		**Unit 3:** Lesson 2, Building Number Concepts (265-267)	
CCSS.Math.Content.5.NF.B.5b Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence a/b = (n×a)/(n×b) to the effect of multiplying a/b by 1.		**Unit 3:** Lesson 2, Building Number Concepts (265-267)	
CCSS.Math.Content.5.NF.B.6 Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.		**Unit 3:** Lesson 9, Problem Solving (331-332); Lesson 11, Problem Solving (346-347); Lesson 14, Problem Solving (372-374) **Unit 4:** Lesson 6, Problem Solving (449-450)	**Unit 1:** Lesson 3, Building Number Concepts (30-32); Lesson 4, Building Number Concepts (41-44)
CCSS.Math.Content.5.NF.B.7a Interpret division of a unit fraction by a non-zero whole number and compute such quotients. For example, create a story context for (1/3) ÷ 4, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that (1/3) ÷ 4 = 1/12 because (1/12) × 4 = 1/3.		**Unit 3:** Lesson 8, Building Number Concepts (317-321)	

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CCSS.Math.Content.5.NF.B.7b Interpret division of a whole number by a unit fraction, and compute such quotients. For example, create a story context for 4 ÷ (1/5); and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that 4 ÷ (1/5) = 20 because 20 × (1/5) = 4.		**Unit 3:** Lesson 8, Building Number Concepts (317-321)	

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CCSS.Math.Content.6.RP.A Understand ratio concepts and use ratio reasoning to solve problems.			**Unit 2:** Lesson 3, Building Number Concepts (193-196); Lesson 7, Building Number Concepts (227-229); Lesson 13, Building Number Concepts (284-285) **Unit 3:** Lesson 1, Problem Solving (331-335); Lesson 2, Problem Solving (342-344); Lesson 4, Problem Solving (358-361); Lesson 6, Problem Solving (374-380); Lesson 8, Problem Solving (392-396); Lesson 10, Problem Solving (414-417)
CCSS.Math.Content.6.RP.A.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. For example, "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."			**Unit 2:** Lesson 1, Problem Solving (175-177); Lesson 2, Problem Solving (186-189); Lesson 3, Building Number Concepts (193-196); Lesson 3, Problem Solving (197-198); Lesson 4, Problem Solving (206-208); Lesson 6, Problem Solving (221-224); Lesson 7, Building Number Concepts (227-229); Lesson 7, Problem Solving (232-231); Lesson 13, Building Number Concepts (284-285); Lesson 15, Problem Solving (308-313) **Unit 3:** Lesson 1, Problem Solving (331-335); Lesson 2, Problem Solving (342-344); Lesson 4, Problem Solving (358-361); Lesson 6, Problem Solving (374-380); Lesson 8, Problem

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			Solving (392-396); Lesson 10, Problem Solving (414-417)
CCSS.Math.Content.6.RP.A.2 Understand the concept of a unit rate a/b associated with a ratio a:b with b ≠ 0, and use rate language in the context of a ratio relationship. For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is 3/4 cup of flour for each cup of sugar." "We paid $75 for 15 hamburgers, which is a rate of $5 per hamburger."[1]			**Unit 2:** Lesson 3, Problem Solving (197-198); Lesson 4, Problem Solving (206-208); Lesson 6, Problem Solving (221-224); Lesson 7, Problem Solving (232-231); Lesson 15, Problem Solving (308-313) **Unit 3:** Lesson 2, Problem Solving (342-344); Lesson 4, Problem Solving (358-361); Lesson 6, Problem Solving (374-380); Lesson 8, Problem Solving (392-396); Lesson 10, Problem Solving (414-417)
CCSS.Math.Content.6.RP.A.3 Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.			**Unit 2:** Lesson 3, Problem Solving (197-198); Lesson 4, Problem Solving (206-208); Lesson 6, Problem Solving (221-224); Lesson 7, Problem Solving (232-231); Lesson 10, Problem Solving (254-256); Lesson 11, Problem Solving (268-270); Lesson 12, Problem Solving (278-280); Lesson 13, Problem Solving (286-289); Lesson 14, Problem Solving (297-298); Lesson 15, Problem Solving (308-313) **Unit 3:** Lesson 2, Problem Solving (342-344); Lesson 4, Problem Solving (358-361); Lesson 6, Problem Solving (374-380); Lesson 8, Problem Solving (392-396); Lesson 10, Problem Solving (414-417); Lesson 3, Problem Solving (453-456) **Unit 7:** Lesson 9, Building Number Concepts (831-833); Lesson 10, Building Number Concepts (839-843)
CCSS.Math.Content.6.RP.A.3a Make tables of equivalent ratios relating quantities with whole number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.			**Unit 2:** Lesson 2, Problem Solving (186-189); Lesson 3, Problem Solving (197-198); Lesson 4, Problem Solving (206-208); Lesson 6, Problem Solving (221-224); Lesson 7, Problem Solving (232-231); Lesson 15, Problem Solving (308-313)

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			Unit 3: Lesson 1, Problem Solving (331-335); Lesson 2, Problem Solving (342-344); Lesson 4, Problem Solving (358-361); Lesson 6, Problem Solving (374-380); Lesson 8, Problem Solving (392-396); Lesson 10, Problem Solving (414-417)
CCSS.Math.Content.6.RP.A.3b Solve unit rate problems including those involving unit pricing and constant speed. For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?			**Unit 2:** Lesson 4, Problem Solving (206-208); Lesson 6, Problem Solving (221-224); Lesson 7, Problem Solving (232-231); Lesson 15, Problem Solving (308-313) **Unit 3:** Lesson 1, Problem Solving (331-335); Lesson 2, Problem Solving (342-344); Lesson 4, Problem Solving (358-361); Lesson 6, Problem Solving (374-380); Lesson 8, Problem Solving (392-396); Lesson 10, Problem Solving (414-417) **Unit 8:** Lesson 6, Problem Solving (912-915)
CCSS.Math.Content.6.RP.A.3c Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.			**Unit 4:** Lesson 1, Problem Solving (433-435); Lesson 2, Problem Solving (441-445); Lesson 3, Problem Solving (453-456)
CCSS.Math.Content.6.RP.A.3c Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.		**Unit 7:** Lesson 1, Building Number Concepts (769-772); Lesson 1, Problem Solving (773-777); Lesson 2, Building Number Concepts (780-782); Lesson 3, Building Number Concepts (790-792); Lesson 5, Building Number Concepts (810-814); Lesson 10, Building Number Concepts (844-847)	
CCSS.Math.Content.6.EE.A Apply and extend previous understandings of arithmetic to algebraic expressions.			**Unit 4:** Lesson 4, Building Number Concepts (460-463) **Unit 5:** Lesson 6, Building Number Concepts (588-594); Lesson 7, Building Number Concepts (597-601); Lesson 8, Building Number Concepts (608-612); Lesson 10, Building Number Concepts (622-627) **Unit 6:** Lesson 1, Building Number Concepts (643-650); Lesson 3, Building Number Concepts (664-670); Lesson 4, Building

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			Number Concepts (678-683); Lesson 5, Building Number Concepts (686-689); Lesson 7, Building Number Concepts (703-709); Lesson 10, Building Number Concepts (728-732)
CCSS.Math.Content.6.EE.A.1 Write and evaluate numerical expressions involving whole-number exponents.	**Unit 7:** Lesson 2, Building Number Concepts (752-755); Lesson 3, Building Number Concepts (760-762); Lesson 4, Building Number Concepts (767-769)		**Unit 4:** Lesson 4, Building Number Concepts (460-463) **Unit 5:** Lesson 6, Building Number Concepts (588-594); Lesson 7, Building Number Concepts (597-601); Lesson 8, Building Number Concepts (608-612); Lesson 10, Building Number Concepts (622-627)
CCSS.Math.Content.6.EE.A.2 Write, read, and evaluate expressions in which letters stand for numbers.			**Unit 2:** Lesson 11, Building Number Concepts (262-267); Lesson 12, Building Number Concepts (274-277) **Unit 4:** Lesson 4, Building Number Concepts (460-463); Lesson 7, Building Number Concepts (489-491); Lesson 9, Building Number Concepts (508-510); Lesson 10, Building Number Concepts (518-523) **Unit 5:** Lesson 6, Building Number Concepts (588-594); Lesson 7, Building Number Concepts (597-601); Lesson 8, Building Number Concepts (608-612); Lesson 10, Building Number Concepts (622-627) **Unit 6:** Lesson 4, Building Number Concepts (678-683); Lesson 5, Building Number Concepts (686-689); Lesson 7, Building Number Concepts (703-709); Lesson 10, Building Number Concepts (728-732)
CCSS.Math.Content.6.EE.A.2a Write expressions that record operations with numbers and with letters standing for numbers. For example, express the calculation "Subtract y from 5" as 5 – y.			**Unit 2:** Lesson 11, Building Number Concepts (262-267); Lesson 12, Building Number Concepts (274-277) **Unit 4:** Lesson 10, Building Number Concepts (518-523) **Unit 5:** Lesson 6, Building Number Concepts (588-594); Lesson 7, Building Number Concepts (597-601); Lesson 8, Building

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			Number Concepts (608-612); Lesson 10, Building Number Concepts (622-627) **Unit 6:** Lesson 1, Building Number Concepts (643-650) **Unit 8:** Lesson 1, Problem Solving (869-871); Lesson 2, Problem Solving (878-800); Lesson 3, Problem Solving (887-891); Lesson 4, Problem Solving (894-898); Lesson 5, Problem Solving (901-904); Lesson 6, Problem Solving (912-915)
CCSS.Math.Content.6.EE.A.2b Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. For example, describe the expression 2 (8 + 7) as a product of two factors; view (8 + 7) as both a single entity and a sum of two terms.			**Unit 2:** Lesson 11, Building Number Concepts (262-267); Lesson 12, Building Number Concepts (274-277) **Unit 5:** Lesson 6, Building Number Concepts (588-594); Lesson 7, Building Number Concepts (597-601); Lesson 8, Building Number Concepts (608-612); Lesson 10, Building Number Concepts (622-627) **Unit 8:** Lesson 1, Problem Solving (869-871); Lesson 2, Problem Solving (878-800); Lesson 3, Problem Solving (887-891); Lesson 4, Problem Solving (894-898); Lesson 5, Problem Solving (901-904); Lesson 6, Problem Solving (912-915)
CCSS.Math.Content.6.EE.A.2c Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). For example, use the formulas V = s3 and A = 6 s2 to find the volume and surface area of a cube with sides of length s = 1/2.			**Unit 5:** Lesson 1, Building Number Concepts (541-545); Lesson 2, Building Number Concepts (553-555); Lesson 3, Building Number Concepts (561-564); Lesson 10, Building Number Concepts (622-627) **Unit 6:** Lesson 1, Building Number Concepts (643-650); Lesson 3, Building Number Concepts (664-670) **Unit 7:** Lesson 1, Building Number Concepts (751-754); Lesson 2, Building Number Concepts (763-765); Lesson 3, Building Number Concepts (772-777); Lesson 4, Building Number Concepts (780-785); Lesson 8, Building Number Concepts (822-825); Lesson 9, Building Number Concepts (831-

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			833); Lesson 10, Building Number Concepts (839-843) **Unit 10:** Lesson 7, Building Number Concepts (1211-1214)
CCSS.Math.Content.6.EE.A.3 Apply the properties of operations to generate equivalent expressions. For example, apply the distributive property to the expression 3 (2 + x) to produce the equivalent expression 6 + 3x; apply the distributive property to the expression 24x + 18y to produce the equivalent expression 6 (4x + 3y); apply properties of operations to y + y + y to produce the equivalent expression 3y.			**Unit 5:** Lesson 7, Building Number Concepts (597-601); Lesson 8, Building Number Concepts (608-612); Lesson 10, Building Number Concepts (622-627) **Unit 7:** Lesson 2, Building Number Concepts (763-765); Lesson 3, Building Number Concepts (772-777); Lesson 4, Building Number Concepts (780-785); Lesson 8, Building Number Concepts (822-825); Lesson 9, Building Number Concepts (831-833); Lesson 10, Building Number Concepts (839-843)
CCSS.Math.Content.6.EE.A.4 Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). For example, the expressions y + y + y and 3y are equivalent because they name the same number regardless of which number y stands for.			**Unit 5:** Lesson 10, Building Number Concepts (622-627)
CCSS.Math.Content.6.EE.B Reason about and solve one-variable equations and inequalities.			**Unit 2:** Lesson 1, Building Number Concepts (171-174); Lesson 2, Building Number Concepts (181-185); Lesson 4, Building Number Concepts (202-205); Lesson 5, Building Number Concepts (211-213); Lesson 6, Building Number Concepts (218-220); Lesson 9, Building Number Concepts (244-248); Lesson 14, Building Number Concepts (293-296); Lesson 15, Building Number Concepts (301-307) **Unit 3:** Lesson 1, Building Number Concepts (325-330); Lesson 2, Building Number Concepts (339-341); Lesson 3, Building Number Concepts (348-351); Lesson 4, Building Number Concepts (355-357); Lesson

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			5, Building Number Concepts (365-369); Lesson 7, Building Number Concepts (383-386); Lesson 7, Problem Solving (387-389); Lesson 9, Building Number Concepts (400-402); Lesson 9, Problem Solving (403-404); Lesson 10, Building Number Concepts (408-413) **Unit 7:** Lesson 3, Building Number Concepts (772-777); Lesson 4, Building Number Concepts (780-785); Lesson 6, Building Number Concepts (801-804); Lesson 7, Building Number Concepts (811-815); Lesson 8, Building Number Concepts (822-825); Lesson 9, Building Number Concepts (831-833); Lesson 10, Building Number Concepts (839-843) **Unit 8:** Lesson 1, Problem Solving (869-871); Lesson 2, Problem Solving (878-800); Lesson 3, Problem Solving (887-891); Lesson 4, Problem Solving (894-898); Lesson 5, Problem Solving (901-904); Lesson 6, Problem Solving (912-915)
CCSS.Math.Content.6.EE.B.5 Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.			**Unit 2:** Lesson 1, Building Number Concepts (171-174); Lesson 2, Building Number Concepts (181-185); Lesson 4, Building Number Concepts (202-205); Lesson 5, Building Number Concepts (211-213); Lesson 6, Building Number Concepts (218-220); Lesson 9, Building Number Concepts (244-248) **Unit 3:** Lesson 1, Building Number Concepts (325-330); Lesson 2, Building Number Concepts (339-341); Lesson 3, Building Number Concepts (348-351); Lesson 4, Building Number Concepts (355-357); Lesson 5, Building Number Concepts (365-369); Lesson 7, Building Number Concepts (383-386); Lesson 7, Problem Solving (387-389) Lesson 9, Building Number Concepts (400-

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			402); Lesson 9, Problem Solving (403-404); Lesson 10, Building Number Concepts (408-413) **Unit 7:** Lesson 3, Building Number Concepts (772-777); Lesson 4, Building Number Concepts (780-785); Lesson 6, Building Number Concepts (801-804); Lesson 7, Building Number Concepts (811-815); Lesson 8, Building Number Concepts (822-825); Lesson 9, Building Number Concepts (831-833); Lesson 10, Building Number Concepts (839-843) **Unit 8:** Lesson 1, Problem Solving (869-871); Lesson 2, Problem Solving (878-800); Lesson 3, Problem Solving (887-891); Lesson 4, Problem Solving (894-898); Lesson 5, Problem Solving (901-904); Lesson 6, Problem Solving (912-915)
CCSS.Math.Content.6.EE.B.6 Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.			**Unit 2:** Lesson 4, Building Number Concepts (202-205); Lesson 5, Building Number Concepts (211-213); Lesson 6, Building Number Concepts (218-220); Lesson 9, Building Number Concepts (244-248); Lesson 14, Building Number Concepts (293-296); Lesson 15, Building Number Concepts (301-307)
CCSS.Math.Content.6.EE.B.7 Solve real-world and mathematical problems by writing and solving equations of the form x + p = q and px = q for cases in which p, q and x are all nonnegative rational numbers.			**Unit 2:** Lesson 14, Building Number Concepts (293-296); Lesson 15, Building Number Concepts (301-307) **Unit 4:** Lesson 1, Building Number Concepts (429-432); Lesson 3, Building Number Concepts (448-452); Lesson 5, Building Number Concepts (471-475); Lesson 6, Building Number Concepts (480-483); Lesson 8, Building Number Concepts (498-501); Lesson 10, Building Number Concepts (518-523) **Unit 7:** Lesson 7, Building Number Concepts (811-815)

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			Unit 8: Lesson 1, Problem Solving (869-871); Lesson 2, Problem Solving (878-800); Lesson 3, Problem Solving (887-891); Lesson 4, Problem Solving (894-898); Lesson 5, Problem Solving (901-904); Lesson 6, Problem Solving (912-915)
CCSS.Math.Content.6.EE.B.8 Write an inequality of the form x > c or x < c to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form x > c or x < c have infinitely many solutions; represent solutions of such inequalities on number line diagrams.			**Unit 3:** Lesson 1, Building Number Concepts (325-330); Lesson 2, Building Number Concepts (339-341); Lesson 3, Building Number Concepts (348-351); Lesson 4, Building Number Concepts (355-357); Lesson 5, Building Number Concepts (365-369); Lesson 7, Building Number Concepts (383-386); Lesson 7, Problem Solving (387-389); Lesson 9, Building Number Concepts (400-402); Lesson 9, Problem Solving (403-404); Lesson 10, Building Number Concepts (408-413)
CCSS.Math.Content.6.EE.C Represent and analyze quantitative relationships between dependent and independent variables.			**Unit 2:** Lesson 5, Building Number Concepts (211-213); Lesson 6, Building Number Concepts (218-220)
CCSS.Math.Content.6.EE.C.9 Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation d = 65t to represent the relationship between distance and time.			**Unit 2:** Lesson 5, Building Number Concepts (211-213); Lesson 6, Building Number Concepts (218-220)

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CCSS.Math.Content.6.G.A Solve real-world and mathematical problems involving area, surface area, and volume.			**Unit 2:** Lesson 8, Building Number Concepts (234-237) **Unit 6:** Lesson 1, Problem Solving (651-653); Lesson 2, Problem Solving (656-661); Lesson 3, Problem Solving (671-675); Lesson 9, Problem Solving (717-724); Lesson 10, Problem Solving (733-739)
CCSS.Math.Content.6.G.A.1 Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.	**Unit 5:** Lesson 3, Problem Solving (533-535); Lesson 4, Problem Solving (542-543)	**Unit 6:** Lesson 1, Problem Solving (644-646); Lesson 2, Problem Solving (653-654); Lesson 4, Problem Solving (663-666); Lesson 5, Problem Solving (669-673); Lesson 6, Problem Solving (682-684); Lesson 12, Problem Solving (728-730)	**Unit 2:** Lesson 8, Building Number Concepts (234-237); Lesson 15, Building Number Concepts (301-307) **Unit 10:** Lesson 1, Building Number Concepts (1159-1167); Lesson 2, Building Number Concepts (1170-1175); Lesson 3, Building Number Concepts (1178-1185)
CCSS.Math.Content.6.G.A.2 Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas V = l w h and V = b h to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.			**Unit 6:** Lesson 2, Problem Solving (656-661); Lesson 3, Problem Solving (671-675); Lesson 9, Problem Solving (717-724); Lesson 10, Problem Solving (733-739)
CCSS.Math.Content.6.G.A.3 Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.		**Unit 9:** Lesson 2, Problem Solving (1014-1016); Lesson 3, Problem Solving (1019-1023); Lesson 4, Problem Solving (1031-1032)	
CCSS.Math.Content.6.G.A.4 Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.	**Unit 3:** Lesson 2, Problem Solving (265-267)		**Unit 5:** Lesson 1, Problem Solving (546-550); Lesson 2, Problem Solving (556-558); Lesson 3, Problem Solving (565-567)

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CCSS.Math.Content.6.NS.A Apply and extend previous understandings of multiplication and division to divide fractions by fractions.			**Unit 1:** Lesson 5, Building Number Concepts (52-55); Lesson 6, Building Number Concepts (60-63)
CCSS.Math.Content.6.NS.A.1 Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. For example, create a story context for (2/3) ÷ (3/4) and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that (2/3) ÷ (3/4) = 8/9 because 3/4 of 8/9 is 2/3. (In general, (a/b) ÷ (c/d) = ad/bc.) How much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 3/4-cup servings are in 2/3 of a cup of yogurt? How wide is a rectangular strip of land with length 3/4 mi and area 1/2 square mi?		**Unit 3:** Lesson 8, Building Number Concepts (317-321); Lesson 9, Building Number Concepts (326-330); Lesson 9, Problem Solving (331-332); Lesson 10, Building Number Concepts (335-337); Lesson 11, Problem Solving (346-347); Lesson 13, Building Number Concepts (360-364); Lesson 14, Building Number Concepts (369-371); Lesson 14, Problem Solving (372-374); Lesson 15, Building Number Concepts (376-381) **Unit 4:** Lesson 7, Building Number Concepts (453-456); Lesson 8, Building Number Concepts (462-463); Lesson 10, Building Number Concepts (475-477)	**Unit 1:** Lesson 5, Building Number Concepts (52-55); Lesson 6, Building Number Concepts (60-63); Lesson 15, Building Number Concepts (145-152)
CCSS.Math.Content.6.NS.B.2 Fluently divide multi-digit numbers using the standard algorithm.	**Unit 4:** Lesson 6, Building Number Concepts (422-425); Lesson 7, Building Number Concepts (430-431); Lesson 8, Building Number Concepts (438-440); Lesson 9, Building Number Concepts (445-448); Lesson 10, Building Number Concepts (454-457); Lesson 15, Building Number Concepts (494-500)		**Unit 1:** Lesson 15, Building Number Concepts (145-152)
CCSS.Math.Content.6.NS.B.3 Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.		**Unit 6:** Lesson 1, Building Number Concepts (639-643); Lesson 2, Building Number Concepts (649-652); Lesson 3, Building Number Concepts (657-660); Lesson 7, Building Number Concepts (687-689); Lesson 12, Building Number Concepts (725-727); Lesson 13, Building Number Concepts (733-735); Lesson 13, Problem Solving (736-737); Lesson 14, Building Number Concepts (740-744); Lesson 15, Building Number Concepts (747-751)	**Unit 1:** Lesson 9, Building Number Concepts (95-97); Lesson 12, Building Number Concepts (120-123); Lesson 14, Building Number Concepts (138-140); Lesson 14, Problem Solving (141-142); Lesson 15, Building Number Concepts (145-152)

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CCSS.Math.Content.6.NS.B.4 Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. For example, express 36 + 8 as 4 (9 + 2).	**Unit 6:** Lesson 1, Building Number Concepts (645-648); Lesson 2, Building Number Concepts (654-658); Lesson 3, Building Number Concepts (664-667); Lesson 4, Building Number Concepts (673-676); Lesson 5, Building Number Concepts (681-683); Lesson 6, Building Number Concepts (687-691); Lesson 10, Building Number Concepts (722-726) **Unit 7:** Lesson 5, Building Number Concepts (775-777); Lesson 6, Building Number Concepts (782-784); Lesson 8, Building Number Concepts (796-798); Lesson 9, Building Number Concepts (806-809); Lesson 10, Building Number Concepts (815-820)	**Unit 3:** Lesson 5, Building Number Concepts (288-292); Lesson 7, Building Number Concepts (307-310); Lesson 8, Building Number Concepts (317-321) **Unit 4:** Lesson 4, Building Number Concepts (428-431)	
CCSS.Math.Content.6.NS.C.5 Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.		**Unit 8:** Lesson 1, Building Number Concepts (863-865); Lesson 3, Building Number Concepts (878-881); Lesson 3, Problem Solving (882-883); Lesson 4, Building Number Concepts (886-888); Lesson 5, Building Number Concepts (895-899)	
CCSS.Math.Content.6.NS.C.6 Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates		**Unit 8:** Lesson 1, Building Number Concepts (863-865); Lesson 2, Building Number Concepts (870-875); Lesson 3, Building Number Concepts (878-881); Lesson 4, Building Number Concepts (886-888); Lesson 11, Problem Solving (944-950); Lesson 12, Problem Solving (953-956); Lesson 15, Problem Solving (983-987)	
CCSS.Math.Content.6.NS.C.6a Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., –(–3) = 3, and that 0 is its own opposite.		**Unit 8:** Lesson 1, Building Number Concepts (863-865); Lesson 11, Problem Solving (944-950); Lesson 12, Problem Solving (953-956); Lesson 15, Problem Solving (983-987)	

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CCSS.Math.Content.6.NS.C.6b Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.		**Unit 8:** Lesson 11, Problem Solving (944-950); Lesson 12, Problem Solving (953-956); **L**esson 15, Problem Solving (983-987) **Unit 9:** Lesson 1, Problem Solving (1004-1006); Lesson 2, Problem Solving (1014-1016); Lesson 3, Problem Solving (1019-1023); Lesson 4, Problem Solving (1031-1032); Lesson 5, Problem Solving (1035-1038); Lesson 7, Problem Solving (1050-1053); Lesson 8, Problem Solving (1056-1059); Lesson 10, Problem Solving (1071-1076)	
CCSS.Math.Content.6.NS.C.6c Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.		**Unit 8:** Lesson 3, Problem Solving (882-883); Lesson 6, Problem Solving (908-910); Lesson 8, Problem Solving (923-925); Lesson 10, Problem Solving (934-939); Lesson 11, Problem Solving (944-950); Lesson 12, Problem Solving (953-956); Lesson 15, Problem Solving (983-987)	
CCSS.Math.Content.6.NS.C.7a Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. For example, interpret –3 > –7 as a statement that –3 is located to the right of –7 on a number line oriented from left to right.		**Unit 8:** Lesson 4, Building Number Concepts (886-888)	
CCSS.Math.Content.6.NS.C.7c Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. For example, for an account balance of –30 dollars, write |–30| = 30 to describe the size of the debt in dollars.		**Unit 9:** Lesson 5, Problem Solving (1035-1038)	
CCSS.Math.Content.6.NS.C.8 Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the			**Unit 9:** Lesson 1, Problem Solving (1013-1015); Lesson 2, Problem Solving (1022-1024); Lesson 3, Problem Solving (1032-1034); Lesson 13, Building Number Concepts (1119-1120)

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same first coordinate or the same second coordinate.			
CCSS.Math.Content.6.SP.A Develop understanding of statistical variability.			**Unit 1:** Lesson 1, Problem Solving (14-17); Lesson 3, Problem Solving (33-38); Lesson 4, Problem Solving (45-49); Lesson 6, Problem Solving (64-69); Lesson 7, Problem Solving (76-80); Lesson 8, Problem Solving (88-92); Lesson 15, Problem Solving (153-159)
CCSS.Math.Content.6.SP.A.2 Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.	**Unit 8:** Lesson 1, Problem Solving (842-844); Lesson 2, Problem Solving (850-851); Lesson 3, Problem Solving (858-861); Lesson 4, Problem Solving (869-871); Lesson 5, Problem Solving (874-876); Lesson 6, Problem Solving (885-887); Lesson 7, Problem Solving (893-894)		**Unit 1:** Lesson 1, Problem Solving (14-17); Lesson 3, Problem Solving (33-38); Lesson 4, Problem Solving (45-49); Lesson 6, Problem Solving (64-69); Lesson 7, Problem Solving (76-80); Lesson 8, Problem Solving (88-92); Lesson 15, Problem Solving (153-159)
CCSS.Math.Content.6.SP.A.3 Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.	**Unit 8:** Lesson 3, Problem Solving (858-861); Lesson 4, Problem Solving (869-871); Lesson 5, Problem Solving (874-876); Lesson 6, Problem Solving (885-887); Lesson 7, Problem Solving (893-894)		**Unit 1:** Lesson 1, Problem Solving (14-17); Lesson 3, Problem Solving (33-38); Lesson 4, Problem Solving (45-49); Lesson 6, Problem Solving (64-69); Lesson 7, Problem Solving (76-80); Lesson 8, Problem Solving (88-92); Lesson 15, Problem Solving (153-159)
CCSS.Math.Content.6.SP.B Summarize and describe distributions.			**Unit 1:** Lesson 6, Problem Solving (64-69); Lesson 7, Problem Solving (76-80); Lesson 8, Problem Solving (88-92); Lesson 15, Problem Solving (153-159)
CCSS.Math.Content.6.SP.B.4 Display numerical data in plots on a number line, including dot plots, histograms, and box plots.			**Unit 1:** Lesson 6, Problem Solving (64-69); Lesson 7, Problem Solving (76-80); Lesson 8, Problem Solving (88-92); Lesson 15, Problem Solving (153-159)
CCSS.Math.Content.6.SP.B.5 Summarize numerical data sets in relation to their context, such as by:			**Unit 1:** Lesson 1, Problem Solving (14-17); Lesson 3, Problem Solving (33-38); Lesson 4, Problem Solving (45-49); Lesson 6, Problem Solving (64-69); Lesson 7, Problem Solving (76-80); Lesson 8, Problem Solving (88-92); Lesson 15, Problem Solving (153-159)
CCSS.Math.Content.6.SP.B.5a Reporting the number of observations.			**Unit 1:** Lesson 3, Problem Solving (33-38); Lesson 4, Problem Solving (45-49)

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CCSS.Math.Content.6.SP.B.5c Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation); as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.	**Unit 8:** Lesson 1, Problem Solving (842-844); Lesson 2, Problem Solving (850-851); Lesson 3, Problem Solving (858-861); Lesson 4, Problem Solving (869-871); Lesson 5, Problem Solving (874-876); Lesson 6, Problem Solving (885-887); Lesson 7, Problem Solving (893-894); Lesson 11, Problem Solving (923-925); Lesson 12, Problem Solving (932-933); Lesson 14, Problem Solving (946-947); Lesson 15, Problem Solving (955-958) **Unit 9:** Lesson 8, Problem Solving (1032-1033)		**Unit 1:** Lesson 1, Problem Solving (14-17); Lesson 3, Problem Solving (33-38); Lesson 4, Problem Solving (45-49); Lesson 6, Problem Solving (64-69); Lesson 7, Problem Solving (76-80); Lesson 8, Problem Solving (88-92); Lesson 15, Problem Solving (153-159)

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CCSS.Math.Content.7.RP.A.1 Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. For example, if a person walks 1/2 mile in each 1/4 hour, compute the unit rate as the complex fraction 1/2/1/4 miles per hour, equivalently 2 miles per hour.			**Unit 2:** Lesson 4, Problem Solving (206-208); Lesson 6, Problem Solving (221-224); Lesson 7, Problem Solving (232-231); Lesson 15, Problem Solving (308-313)
CCSS.Math.Content.7.RP.A.2 Recognize and represent proportional relationships between quantities.			**Unit 2:** Lesson 6, Problem Solving (221-224); Lesson 7, Problem Solving (232-231); Lesson 15, Problem Solving (308-313); Lesson 2, Building Number Concepts (439-440)
CCSS.Math.Content.7.RP.A.2a Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.			**Unit 2:** Lesson 4, Problem Solving (206-208); Lesson 6, Problem Solving (221-224); Lesson 7, Problem Solving (232-231); Lesson 15, Problem Solving (308-313)

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CCSS.Math.Content.7.RP.A.2c Represent proportional relationships by equations. For example, if total cost t is proportional to the number n of items purchased at a constant price p, the relationship between the total cost and the number of items can be expressed as t = pn.			**Unit 2:** Lesson 4, Problem Solving (206-208); Lesson 6, Problem Solving (221-224); Lesson 7, Problem Solving (232-231); Lesson 15, Problem Solving (308-313) **Unit 4:** Lesson 2, Building Number Concepts (439-440); Lesson 2, Problem Solving (441-445); Lesson 3, Problem Solving (453-456); Lesson 4, Problem Solving (464-467); Lesson 6, Problem Solving (484-486); Lesson 7, Problem Solving (492-495); Lesson 8, Problem Solving (502-505); Lesson 9, Problem Solving (511-514); Lesson 10, Problem Solving (524-529)
CCSS.Math.Content.7.RP.A.3 Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.			**Unit 4:** Lesson 2, Building Number Concepts (439-440); Lesson 2, Problem Solving (441-445); Lesson 3, Problem Solving (453-456); Lesson 4, Problem Solving (464-467); Lesson 6, Problem Solving (484-486); Lesson 7, Problem Solving (492-495); Lesson 8, Problem Solving (502-505); Lesson 9, Problem Solving (511-514); Lesson 10, Problem Solving (524-529)
CCSS.Math.Content.7.EE.A Use properties of operations to generate equivalent expressions.			**Unit 6:** Lesson 3, Building Number Concepts (664-670); Lesson 5, Building Number Concepts (686-689); Lesson 7, Building Number Concepts (703-709); Lesson 10, Building Number Concepts (728-732)
CCSS.Math.Content.7.EE.A.1 Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.			**Unit 6:** Lesson 3, Building Number Concepts (664-670); Lesson 5, Building Number Concepts (686-689); Lesson 7, Building Number Concepts (703-709); Lesson 10, Building Number Concepts (728-732)
CCSS.Math.Content.7.EE.B Solve real-life and mathematical problems using numerical and algebraic expressions and equations.			**Unit 6:** Lesson 3, Building Number Concepts (664-670)

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CCSS.Math.Content.7.EE.B.3 Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals); using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. For example: If a woman making $25 an hour gets a 10% raise, she will make an additional 1/10 of her salary an hour, or $2.50, for a new salary of $27.50. If you want to place a towel bar 9 3/4 inches long in the center of a door that is 27 1/2 inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.			**Unit 6:** Lesson 3, Building Number Concepts (664-670) **Unit 8:** Lesson 12, Building Number Concepts (962-964); Lesson 13, Building Number Concepts (970-974); Lesson 14, Building Number Concepts (981-983); Lesson 15, Building Number Concepts (989-993)
CCSS.Math.Content.7.EE.B.4 Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.			**Unit 4:** Lesson 3, Building Number Concepts (448-452); Lesson 5, Building Number Concepts (471-475); Lesson 6, Building Number Concepts (480-483); Lesson 8, Building Number Concepts (498-501); Lesson 10, Building Number Concepts (518-523) **Unit 8:** Lesson 1, Problem Solving (869-871); Lesson 2, Problem Solving (878-800); Lesson 3, Problem Solving (887-891); Lesson 4, Problem Solving (894-898); Lesson 5, Problem Solving (901-904); Lesson 6, Problem Solving (912-915); Lesson 7, Problem Solving (921-925); Lesson 8, Problem Solving (933-935)

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CCSS.Math.Content.7.EE.B.4a Solve word problems leading to equations of the form px + q = r and p(x + q) = r, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?			**Unit 8:** Lesson 1, Problem Solving (869-871); Lesson 2, Problem Solving (878-800); Lesson 3, Problem Solving (887-891); Lesson 4, Problem Solving (894-898); Lesson 5, Problem Solving (901-904); Lesson 6, Problem Solving (912-915); Lesson 7, Problem Solving (921-925); Lesson 8, Problem Solving (933-935)
CCSS.Math.Content.7.G.A.1 Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.	**Unit 3:** Lesson 12, Problem Solving (341-343) **Unit 6:** Lesson 7, Problem Solving (700-703); Lesson 8, Problem Solving (709-711); Lesson 9, Problem Solving (718-719); Lesson 10, Problem Solving (727-730)		**Unit 2:** Lesson 8, Problem Solving (238-240); Lesson 9, Problem Solving (249-250)
CCSS.Math.Content.7.G.A.2 Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.		**Unit 4:** Lesson 7, Problem Solving (457-459); Lesson 10, Problem Solving (478-482) **Unit 5:** Lesson 2, Problem Solving (508-510); Lesson 3, Problem Solving (518-519); Lesson 12, Problem Solving (594-595)	
CCSS.Math.Content.7.G.B Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.			**Unit 2:** Lesson 8, Building Number Concepts (234-237) **Unit 6:** Lesson 8, Problem Solving (712-714)
CCSS.Math.Content.7.G.B.4 Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.		**Unit 6:** Lesson 9, Problem Solving (700-704); Lesson 10, Problem Solving (707-711); Lesson 11, Problem Solving (720-722); Lesson 12, Problem Solving (728-730); Lesson 15, Problem Solving (752-757)	**Unit 2:** Lesson 8, Building Number Concepts (234-237)

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CCSS.Math.Content.7.G.B.5 Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.			**Unit 7:** Lesson 2, Problem Solving (766-769); Lesson 4, Problem Solving (786-790); Lesson 5, Problem Solving (793-796); Lesson 6, Problem Solving (805-808); Lesson 7, Problem Solving (816-819); Lesson 8, Problem Solving (826-828); Lesson 9, Problem Solving (834-836); Lesson 10, Problem Solving (844-851)
CCSS.Math.Content.7.G.B.6 Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.			**Unit 5:** Lesson 5, Problem Solving (578-583); Lesson 7, Problem Solving (602-605); Lesson 8, Problem Solving (613-614); Lesson 9, Problem Solving (617-619); Lesson 10, Problem Solving (628-632); Lesson 3, Problem Solving (671-675); Lesson 8, Problem Solving (712-714); Lesson 9, Problem Solving (717-724); Lesson 10, Problem Solving (733-739)
CCSS.Math.Content.7.NS.A Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.			**Unit 5:** Lesson 4, Building Number Concepts (570-575)
CCSS.Math.Content.7.NS.A.1 Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.		**Unit 8:** Lesson 2, Building Number Concepts (870-875); Lesson 5, Building Number Concepts (895-899); Lesson 6, Building Number Concepts (904-907); Lesson 7, Building Number Concepts (913-916); Lesson 8, Building Number Concepts (919-922); Lesson 9, Building Number Concepts (928-931); Lesson 13, Building Number Concepts (959-964); Lesson 14, Building Number Concepts (967-971); Lesson 15, Building Number Concepts (974-982)	

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CCSS.Math.Content.7.NS.A.1a Describe situations in which opposite quantities combine to make 0. For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged.		**Unit 8:** Lesson 2, Building Number Concepts (870-875); Lesson 5, Building Number Concepts (895-899); Lesson 6, Building Number Concepts (904-907); Lesson 7, Building Number Concepts (913-916); Lesson 8, Building Number Concepts (919-922); Lesson 9, Building Number Concepts (928-931); Lesson 13, Building Number Concepts (959-964); Lesson 14, Building Number Concepts (967-971); Lesson 15, Building Number Concepts (974-982)	
CCSS.Math.Content.7.NS.A.1b Understand p + q as the number located a distance |q| from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.		**Unit 8:** Lesson 5, Building Number Concepts (895-899); Lesson 6, Building Number Concepts (904-907); Lesson 7, Building Number Concepts (913-916); Lesson 8, Building Number Concepts (919-922); Lesson 9, Building Number Concepts (928-931); Lesson 13, Building Number Concepts (959-964); Lesson 14, Building Number Concepts (967-971); Lesson 15, Building Number Concepts (974-982) **Unit 9:** Lesson 3, Problem Solving (1019-1023); Lesson 4, Problem Solving (1031-1032); Lesson 5, Problem Solving (1035-1038); Lesson 6, Building Number Concepts (1043-1047); Lesson 10, Building Number Concepts (1068-1070)	

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CCSS.Math.Content.7.NS.A.1c Understand subtraction of rational numbers as adding the additive inverse, $p – q = p + (–q)$. Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.		**Unit 8:** Lesson 7, Building Number Concepts (913-916); Lesson 8, Building Number Concepts (919-922); Lesson 9, Building Number Concepts (928-931); Lesson 13, Building Number Concepts (959-964); Lesson 14, Building Number Concepts (967-971); Lesson 15, Building Number Concepts (974-982) **Unit 9:** Lesson 3, Problem Solving (1019-1023); Lesson 4, Problem Solving (1031-1032); Lesson 5, Problem Solving (1035-1038); Lesson 6, Building Number Concepts (1043-1047); Lesson 10, Building Number Concepts (1068-1070)	**Unit 5:** Lesson 4, Building Number Concepts (570-575)
CCSS.Math.Content.7.NS.A.1d Apply properties of operations as strategies to add and subtract rational numbers.		**Unit 8:** Lesson 9, Building Number Concepts (928-931); Lesson 13, Building Number Concepts (959-964); Lesson 14, Building Number Concepts (967-971); Lesson 15, Building Number Concepts (974-982) **Unit 9:** Lesson 6, Building Number Concepts (1043-1047); Lesson 10, Building Number Concepts (1068-1070)	**Unit 6:** Lesson 1, Building Number Concepts (643-650); Lesson 10, Building Number Concepts (728-732)
CCSS.Math.Content.7.NS.A.2 Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.		**Unit 9:** Lesson 1, Building Number Concepts (999-1003); Lesson 2, Building Number Concepts (1009-1013); Lesson 4, Building Number Concepts (1026-1030); Lesson 6, Building Number Concepts (1043-1047); Lesson 10, Building Number Concepts (1068-1070)	
CCSS.Math.Content.7.NS.A.2a Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as $(–1)(–1) = 1$ and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.		**Unit 9:** Lesson 1, Building Number Concepts (999-1003); Lesson 2, Building Number Concepts (1009-1013); Lesson 6, Building Number Concepts (1043-1047); Lesson 10, Building Number Concepts (1068-1070)	

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CCSS.Math.Content.7.NS.A.2b Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers, then –(p/q) = (–p)/q = p/(–q). Interpret quotients of rational numbers by describing real world contexts.		**Unit 9:** Lesson 4, Building Number Concepts (1026-1030); Lesson 6, Building Number Concepts (1043-1047); Lesson 10, Building Number Concepts (1068-1070)	
CCSS.Math.Content.7.NS.A.2c Apply properties of operations as strategies to multiply and divide rational numbers.		**Unit 9:** Lesson 2, Building Number Concepts (1009-1013); Lesson 4, Building Number Concepts (1026-1030); Lesson 6, Building Number Concepts (1043-1047); Lesson 10, Building Number Concepts (1068-1070)	**Unit 6:** Lesson 1, Building Number Concepts (643-650)
CCSS.Math.Content.7.NS.A.2d Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.		**Unit 5:** Lesson 9, Building Number Concepts (563-568); Lesson 10, Building Number Concepts (573-576) **Unit 7:** Lesson 2, Building Number Concepts (780-782)	**Unit 1:** Lesson 7, Building Number Concepts (72-75); Lesson 8, Building Number Concepts (83-87)
CCSS.Math.Content.7.NS.A.3 Solve real-world and mathematical problems involving the four operations with rational numbers.		**Unit 8:** Lesson 3, Building Number Concepts (878-881)	
CCSS.Math.Content.7.SP.A.1 Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.		**Unit 7:** Lesson 8, Problem Solving (834-836); Lesson 9, Problem Solving (839-841); Lesson 10, Problem Solving (848-851)	

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CCSS.Math.Content.7.SP.A.2 Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. For example, estimate the mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be.		**Unit 7:** Lesson 8, Problem Solving (834-836); Lesson 9, Problem Solving (839-841); Lesson 10, Problem Solving (848-851)	
CCSS.Math.Content.7.SP.C.5 Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.		**Unit 7:** Lesson 1, Problem Solving (773-777); Lesson 2, Problem Solving (783-787); Lesson 3, Problem Solving (793-797); Lesson 4, Building Number Concepts (800-804); Lesson 4, Problem Solving (805-807); Lesson 6, Problem Solving (819-822); Lesson 7, Building Number Concepts (825-828); Lesson 7, Problem Solving (829-831); Lesson 10, Problem Solving (848-851)	
CCSS.Math.Content.7.SP.C.6 Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability. For example, when rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times.		**Unit 7:** Lesson 7, Building Number Concepts (825-828); Lesson 7, Problem Solving (829-831)	
CCSS.Math.Content.7.SP.C.7 Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy		**Unit 7:** Lesson 2, Problem Solving (783-787); Lesson 3, Problem Solving (793-797); Lesson 4, Problem Solving (805-807); Lesson 6, Problem Solving (819-822); Lesson 7, Building Number Concepts (825-828)	

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CCSS.Math.Content.7.SP.C.7a Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected.		**Unit 7:** Lesson 3, Problem Solving (793-797); Lesson 4, Problem Solving (805-807 ; Lesson 6, Problem Solving (819-822); Lesson 7, Building Number Concepts (825-828); Lesson 10, Problem Solving (848-851)	
CCSS.Math.Content.7.SP.C.7b Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?		**Unit 7:** Lesson 7, Building Number Concepts (825-828); Lesson 7, Problem Solving (829-831)	
CCSS.Math.Content.7.SP.C.8 Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.		**Unit 7:** Lesson 10, Problem Solving (848-851)	
CCSS.Math.Content.7.SP.C.8a Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.		**Unit 7:** Lesson 4, Building Number Concepts (800-804); Lesson 4, Problem Solving (805-807); Lesson 6, Problem Solving (819-822); Lesson 7, Building Number Concepts (825-828); Lesson 10, Problem Solving (848-851)	
CCSS.Math.Content.7.SP.C.8b Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., “rolling double sixes”); identify the outcomes in the sample space which compose the event.		**Unit 7:** Lesson 4, Building Number Concepts (800-804); Lesson 4, Problem Solving (805-807); Lesson 7, Building Number Concepts (825-828); Lesson 10, Problem Solving (848-851)	

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CCSS.Math.Content.8.EE.A.1 Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example, 32 × 3–5 = 3–3 = 1/33 = 1/27	**Unit 7:** Lesson 3, Building Number Concepts (760-762); Lesson 4, Building Number Concepts (767-769)		
CCSS.Math.Content.8.EE.A.2 Use square root and cube root symbols to represent solutions to equations of the form x2 = p and x3 = p, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that √2 is irrational.			**Unit 10:** Lesson 2, Building Number Concepts (1170-1175); Lesson 3, Building Number Concepts (1178-1185); Lesson 5, Building Number Concepts (1195-1198); Lesson 7, Building Number Concepts (1211-1214); Lesson 8, Building Number Concepts (1220-1222)
CCSS.Math.Content.8.EE.B.5 Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.			**Unit 9:** Lesson 7, Building Number Concepts (1062-1065); Lesson 8, Building Number Concepts (1071-1074)
CCSS.Math.Content.8.EE.C.7 Solve linear equations in one variable.			**Unit 2:** Lesson 5, Building Number Concepts (211-213)
CCSS.Math.Content.8.EE.C.7a Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form x = a, a = a, or a = b results (where a and b are different numbers).			**Unit 2:** Lesson 5, Building Number Concepts (211-213)
CCSS.Math.Content.8.EE.C.7b Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.			**Unit 7:** Lesson 6, Building Number Concepts (801-804); Lesson 7, Building Number Concepts (811-815); Lesson 8, Building Number Concepts (822-825); Lesson 9, Building Number Concepts (831-833); Lesson 10, Building Number Concepts (839-843)

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			Unit 8: Lesson 1, Building Number Concepts (863-868); Lesson 2, Building Number Concepts (874-877); Lesson 3, Building Number Concepts (883-886); Lesson 6, Building Number Concepts (909-911); Lesson 7, Building Number Concepts (918-920); Lesson 8, Building Number Concepts (928-932); Lesson 9, Building Number Concepts (938-941); Lesson 11, Building Number Concepts (954-956); Lesson 12, Building Number Concepts (962-964); Lesson 13, Building Number Concepts (970-974); Lesson 14, Building Number Concepts (981-983); Lesson 15, Building Number Concepts (989-993) **Unit 9:** Lesson 12, Building Number Concepts (1109-1111); Lesson 12, Problem Solving (1112-1116); Lesson 13, Building Number Concepts (1119-1120); Lesson 13, Problem Solving (1121-1123); Lesson 14, Building Number Concepts (1127-1132); Lesson 15, Building Number Concepts (1137-1141); Lesson 15, Problem Solving (1142-1148) **Unit 10:** Lesson 8, Building Number Concepts (1220-1222)
CCSS.Math.Content.8.EE.C.8a Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.			**Unit 9:** Lesson 13, Problem Solving (1121-1123); Lesson 14, Problem Solving (1133-1134); Lesson 15, Problem Solving (1142-1148)
CCSS.Math.Content.8.F.A Define, evaluate, and compare functions.			**Unit 9:** Lesson 1, Building Number Concepts (1009-1012); Lesson 2, Building Number Concepts (1019-1021); Lesson 3, Building Number Concepts (1028-1031); Lesson 4, Building Number Concepts (1038-1041); Lesson 5, Building Number Concepts (1044-1048); Lesson 6, Building Number Concepts (1053-1055); Lesson 14, Building Number

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			Concepts (1127-1132); Lesson 15, Building Number Concepts (1137-1141)
CCSS.Math.Content.8.F.A.1 Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.[1]			**Unit 4:** Lesson 6, Building Number Concepts (480-483); Lesson 8, Building Number Concepts (498-501); Lesson 10, Building Number Concepts (518-523) **Unit 9:** Lesson 1, Building Number Concepts (1009-1012); Lesson 2, Building Number Concepts (1019-1021); Lesson 3, Building Number Concepts (1028-1031); Lesson 4, Building Number Concepts (1038-1041); Lesson 5, Building Number Concepts (1044-1048); Lesson 6, Building Number Concepts (1053-1055); Lesson 10, Building Number Concepts (1088-1093); Lesson 11, Building Number Concepts (1098-1100); Lesson 15, Building Number Concepts (1137-1141)
CCSS.Math.Content.8.F.A.2 Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change.			**Unit 9:** Lesson 6, Problem Solving (1056-1059); Lesson 7, Problem Solving (1066-1067); Lesson 8, Building Number Concepts (1071-1074); Lesson 8, Problem Solving (1075-1076); Lesson 9, Building Number Concepts (1079-1082); Lesson 9, Problem Solving (1083-1085); Lesson 10, Building Number Concepts (1088-1093); Lesson 11, Building Number Concepts (1098-1100); Lesson 11, Problem Solving (1101-1105); Lesson 13, Building Number Concepts (1119-1120); Lesson 14, Building Number Concepts (1127-1132); Lesson 15, Building Number Concepts (1137-1141)
CCSS.Math.Content.8.F.A.3 Interpret the equation y = mx + b as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. For example, the function A = s2 giving the area of a square as a function of its side length is not linear because its graph contains the points (1,1); (2,4) and (3,9); which are not on a straight line.			**Unit 9:** Lesson 7, Building Number Concepts (1062-1065); Lesson 8, Building Number Concepts (1071-1074); Lesson 9, Building Number Concepts (1079-1082); Lesson 10, Building Number Concepts (1088-1093); Lesson 11, Building Number Concepts (1098-1100); Lesson 13, Building Number Concepts (1119-1120); Lesson 14, Building Number

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			Concepts (1127-1132); Lesson 15, Building Number Concepts (1137-1141) **Unit 10:** Lesson 4, Problem Solving (1188-1192); Lesson 6, Problem Solving (1203-1208); Lesson 7, Problem Solving (1215-1217); Lesson 8, Problem Solving (1223-1226); Lesson 10, Problem Solving (1241-1247)
CCSS.Math.Content.8.F.B Use functions to model relationships between quantities.			**Unit 9:** Lesson 2, Building Number Concepts (1019-1021); Lesson 3, Building Number Concepts (1028-1031); Lesson 4, Building Number Concepts (1038-1041); Lesson 5, Building Number Concepts (1044-1048); Lesson 6, Building Number Concepts (1053-1055); Lesson 7, Building Number Concepts (1062-1065); Lesson 8, Building Number Concepts (1071-1074); Lesson 9, Building Number Concepts (1079-1082); Lesson 10, Building Number Concepts (1088-1093); Lesson 11, Building Number Concepts (1098-1100)
CCSS.Math.Content.8.F.B.4 Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.			**Unit 9:** Lesson 4, Building Number Concepts (1038-1041); Lesson 5, Building Number Concepts (1044-1048); Lesson 6, Building Number Concepts (1053-1055); Lesson 6, Problem Solving (1056-1059); Lesson 7, Building Number Concepts (1062-1065); Lesson 7, Problem Solving (1066-1067); Lesson 8, Building Number Concepts (1071-1074); Lesson 8, Problem Solving (1075-1076); Lesson 9, Building Number Concepts (1079-1082); Lesson 9, Problem Solving (1083-1085); Lesson 10, Building Number Concepts (1088-1093); Lesson 11, Building Number Concepts (1098-1100); Lesson 11, Problem Solving (1101-1105); Lesson 12, Problem Solving (1112-1116); Lesson 13, Problem Solving (1121-1123); Lesson 14, Problem Solving (1133-1134); Lesson 15, Problem Solving (1142-1148)

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CCSS.Math.Content.8.F.B.5 Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.			**Unit 9:** Lesson 3, Building Number Concepts (1028-1031); Lesson 4, Building Number Concepts (1038-1041); Lesson 5, Building Number Concepts (1044-1048); Lesson 6, Building Number Concepts (1053-1055); Lesson 6, Problem Solving (1056-1059); Lesson 7, Building Number Concepts (1062-1065); Lesson 7, Problem Solving (1066-1067); Lesson 8, Building Number Concepts (1071-1074); Lesson 8, Problem Solving (1075-1076); Lesson 9, Building Number Concepts (1079-1082); Lesson 9, Problem Solving (1083-1085); Lesson 10, Building Number Concepts (1088-1093); Lesson 11, Building Number Concepts (1098-1100); Lesson 11, Problem Solving (1101-1105); Lesson 12, Problem Solving (1112-1116); Lesson 13, Problem Solving (1121-1123); Lesson 14, Problem Solving (1133-1134); Lesson 15, Building Number Concepts (1137-1141); Lesson 15, Problem Solving (1142-1148); Lesson 4, Problem Solving (1188-1192) **Unit 10:** Lesson 6, Problem Solving (1203-1208); Lesson 7, Problem Solving (1215-1217); Lesson 8, Problem Solving (1223-1226); Lesson 10, Problem Solving (1241-1247)
CCSS.Math.Content.8.G.A.1 Verify experimentally the properties of rotations, reflections, and translations:	**Unit 7:** Lesson 3, Problem Solving (763-764)	**Unit 4:** Lesson 3, Problem Solving (423-425); Lesson 4, Problem Solving (432-435); Lesson 10, Problem Solving (478-482) **Unit 5:** Lesson 6, Problem Solving (541-542) **Unit 9:** Lesson 7, Problem Solving (1050-1053)	
CCSS.Math.Content.8.G.A.1a Lines are taken to lines, and line segments to line segments of the same length.		**Unit 4:** Lesson 3, Problem Solving (423-425); **Unit 9:** Lesson 5, Problem Solving (1035-1038); Lesson 7, Problem Solving (1050-1053)	

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CCSS.Math.Content.8.G.A.2 Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.	**Unit 6:** Lesson 4, Problem Solving (677-678); Lesson 6, Problem Solving (692-693) **Unit 7:** Lesson 8, Problem Solving (799-803); Lesson 9, Problem Solving (810-812); Lesson 10, Problem Solving (821-824)	**Unit 4:** Lesson 4, Problem Solving (432-435); Lesson 10, Problem Solving (478-482)	
CCSS.Math.Content.8.G.A.3 Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.	**Unit 6:** Lesson 7, Problem Solving (700-703); Lesson 8, Problem Solving (709-711); Lesson 9, Problem Solving (718-719); Lesson 10, Problem Solving (727-730)	**Unit 4:** Lesson 10, Problem Solving (478-482); Lesson 4, Problem Solving (1031-1032) **Unit 9:** Lesson 8, Problem Solving (1056-1059); Lesson 10, Problem Solving (1071-1076)	**Unit 9:** Lesson 2, Problem Solving (1022-1024); Lesson 3, Problem Solving (1032-1034)
CCSS.Math.Content.8.G.A.4 Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two dimensional figures, describe a sequence that exhibits the similarity between them.	**Unit 7:** Lesson 7, Problem Solving (790-793); Lesson 8, Problem Solving (799-803); Lesson 9, Problem Solving (810-812); Lesson 10, Problem Solving (821-824)		
CCSS.Math.Content.8.G.A.5 Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so.			**Unit 7:** Lesson 1, Problem Solving (755-760); Lesson 2, Problem Solving (766-769); Lesson 4, Problem Solving (786-790); Lesson 5, Problem Solving (793-796); Lesson 6, Problem Solving (805-808); Lesson 9, Problem Solving (834-836)
CCSS.Math.Content.8.G.B Understand and apply the Pythagorean Theorem.			**Unit 10:** Lesson 10, Building Number Concepts (1235-1240); Lesson 1, Building Number Concepts (1159-1167); Lesson 2, Building Number Concepts (1170-1175); Lesson 3, Building Number Concepts (1178-1185)
CCSS.Math.Content.8.G.B.7 Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and			**Unit 10:** Lesson 3, Building Number Concepts (1178-1185); Lesson 10, Building Number Concepts (1235-1240)

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mathematical problems in two and three dimensions.			
CCSS.Math.Content.8.G.C Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.			**Unit 6:** Lesson 6, Problem Solving (694-700); Lesson 8, Problem Solving (712-714); Lesson 9, Problem Solving (717-724); Lesson 10, Problem Solving (733-739)
CCSS.Math.Content.8.G.C.9 Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.			**Unit 6:** Lesson 6, Problem Solving (694-700); Lesson 8, Problem Solving (712-714); Lesson 9, Problem Solving (717-724); Lesson 10, Problem Solving (733-739)
CCSS.Math.Content.8.NS.A.1 Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.			**Unit 10:** Lesson 9, Building Number Concepts (1229-1232); Lesson 10, Building Number Concepts (1235-1240)
CCSS.Math.Content.8.NS.A.2 Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., π2). For example, by truncating the decimal expansion of √2, show that √2 is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.			**Unit 10:** Lesson 9, Building Number Concepts (1229-1232); Lesson 10, Building Number Concepts (1235-1240)
CCSS.Math.Content.8.SP.A Investigate patterns of association in bivariate data.			**Unit 1:** Lesson 9, Problem Solving (98-101); Lesson 11, Problem Solving (115-117); Lesson 12, Problem Solving (124-125); Lesson 13, Problem Solving (132-135); Lesson 15, Problem Solving (153-159)

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CCSS.Math.Content.8.SP.A.1 Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.	**Unit 8:** Lesson 6, Problem Solving (885-887); Lesson 7, Problem Solving (893-894)	**Unit 8:** Lesson 4, Problem Solving (889-892); Lesson 6, Problem Solving (908-910); Lesson 12, Problem Solving (953-956)	**Unit 1:** Lesson 9, Problem Solving (98-101); Lesson 11, Problem Solving (115-117); Lesson 12, Problem Solving (124-125); Lesson 13, Problem Solving (132-135); Lesson 15, Problem Solving (153-159)
CCSS.Math.Content.8.SP.A.2 Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.			**Unit 1:** Lesson 13, Problem Solving (132-135); Lesson 15, Problem Solving (153-159)
CCSS.Math.Content.HSA-CED.A Create equations that describe numbers or relationships			**Unit 8:** Lesson 7, Problem Solving (921-925); Lesson 8, Problem Solving (933-935); Lesson 10, Problem Solving (946-949); Lesson 11, Problem Solving (957-959); Lesson 12, Problem Solving (965-967); Lesson 13, Problem Solving (975-978)
CCSS.Math.Content.HSA-CED.A.1 Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions.			**Unit 8:** Lesson 7, Problem Solving (921-925); Lesson 8, Problem Solving (933-935); Lesson 10, Problem Solving (946-949); Lesson 11, Problem Solving (957-959); Lesson 12, Problem Solving (965-967); Lesson 13, Problem Solving (975-978)
CCSS.Math.Content.HSA-CED.A.2 Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.			**Unit 9:** Lesson 5, Building Number Concepts (1044-1048); Lesson 6, Building Number Concepts (1053-1055)
CCSS.Math.Content.HSA-CED.A.4 Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. For example, rearrange Ohm's law V = IR to highlight resistance R.			**Unit 8:** Lesson 6, Problem Solving (912-915)

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CCSS.Math.Content.HSA-REI.A Understand solving equations as a process of reasoning and explain the reasoning			**Unit 8:** Lesson 1, Building Number Concepts (863-868); Lesson 2, Building Number Concepts (874-877); Lesson 3, Building Number Concepts (883-886); Lesson 6, Building Number Concepts (909-911); Lesson 7, Building Number Concepts (918-920); Lesson 8, Building Number Concepts (928-932); Lesson 9, Building Number Concepts (938-941); Lesson 9, Problem Solving (942-943); Lesson 11, Building Number Concepts (954-956); Lesson 12, Building Number Concepts (962-964); Lesson 13, Building Number Concepts (970-974); Lesson 14, Building Number Concepts (981-983); Lesson 14, Problem Solving (984-986); Lesson 15, Building Number Concepts (989-993); Lesson 15, Problem Solving (994-997)
CCSS.Math.Content.HSA-REI.A.1 Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.			**Unit 8:** Lesson 9, Problem Solving (942-943); Lesson 14, Problem Solving (984-986); Lesson 15, Problem Solving (994-997)
CCSS.Math.Content.HSA-REI.B Solve equations and inequalities in one variable			**Unit 8:** Lesson 1, Building Number Concepts (863-868); Lesson 2, Building Number Concepts (874-877); Lesson 3, Building Number Concepts (883-886); Lesson 6, Building Number Concepts (909-911); Lesson 7, Building Number Concepts (918-920); Lesson 8, Building Number Concepts (928-932); Lesson 9, Building Number Concepts (938-94); Lesson 14, Problem Solving (984-986); Lesson 15, Problem Solving (994-997)

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CCSS.Math.Content.HSA-REI.B.3 Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.			**Unit 8:** Lesson 9, Problem Solving (942-943); Lesson 12, Building Number Concepts (962-964); Lesson 13, Building Number Concepts (970-974); Lesson 14, Building Number Concepts (981-983); Lesson 14, Problem Solving (984-986); Lesson 15, Building Number Concepts (989-993); Lesson 15, Problem Solving (994-997) **Unit 9:** Lesson 12, Building Number Concepts (1109-1111); Lesson 12, Problem Solving (1112-1116); Lesson 13, Problem Solving (1121-1123); Lesson 15, Problem Solving (1142-1148) **Unit 10:** Lesson 7, Building Number Concepts (1211-1214); Lesson 8, Building Number Concepts (1220-1222)
CCSS.Math.Content.HSA-REI.C.6 Solve systems of linear equations exactly and approximately (e.g., with graphs); focusing on pairs of linear equations in two variables.			**Unit 9:** Lesson 13, Problem Solving (1121-1123); Lesson 14, Problem Solving (1133-1134); Lesson 15, Problem Solving (1142-1148)

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CCSS.MATH.PRACTICE.MP1 Make sense of problems and persevere in solving them. Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.	**Unit 1:** Lesson 1, Problem Solving (14-15); Lesson 2, Problem Solving (22-24); Lesson 3, Problem Solving (30-31); Lesson 4, Problem Solving (36-38); Lesson 8, Problem Solving (65-66); Lesson 9, Problem Solving (72-74); Lesson 13, Problem Solving (104-105); Lesson 14, Problem Solving (108-110); Lesson 15, Problem Solving (117-120); Lesson 8, Problem Solving (313-315)	**Unit 1:** Lesson 1, Problem Solving (12-13); Lesson 2, Problem Solving (19-20); Lesson 3, Problem Solving (27-29); Lesson 4, Problem Solving (35-37); Lesson 6, Problem Solving (51-53); Lesson 7, Problem Solving (59-62); Lesson 8, Problem Solving (68-69); Lesson 9, Problem Solving (76-78); Lesson 10, Problem Solving (89-92); Lesson 10, Building Number Concepts (189-193); Lesson 11, Building Number Concepts (198-201); Lesson 12, Building Number Concepts (207-210); Lesson 13, Building Number Concepts (215-219); Lesson 14, Building Number Concepts (224-227); Lesson 15, Building Number Concepts (232-239); Lesson 1, Problem Solving (773-777) **Unit 7:** Lesson 2, Problem Solving (783-787); Lesson 3, Problem Solving (793-797); Lesson 4, Problem Solving (805-807); Lesson 6, Problem Solving (819-822); Lesson 7, Problem Solving (829-831); Lesson 8, Problem Solving (834-836); Lesson 9, Problem Solving (839-841); Lesson 10, Problem Solving (848-851)	**Unit 4:** Lesson 1, Building Number Concepts (429-432); Lesson 2, Building Number Concepts (439-440); Lesson 3, Building Number Concepts (448-452); Lesson 4, Building Number Concepts (460-463); Lesson 5, Building Number Concepts (471-475); Lesson 6, Building Number Concepts (480-483); Lesson 7, Building Number Concepts (489-491); Lesson 8, Building Number Concepts (498-501); Lesson 9, Building Number Concepts (508-510); Lesson 10, Building Number Concepts (518-523)
CCSS.MATH.PRACTICE.MP2 Reason abstractly and quantitatively. Mathematically proficient students make sense of quantities and their relationships in problem		**Unit 1:** Lesson 1, Problem Solving (12-13); Lesson 2, Problem Solving (19-20); Lesson 3, Problem Solving (27-29); Lesson 4, Problem Solving (35-37); Lesson 6, Problem Solving	**Unit 4:** Lesson 1, Building Number Concepts (429-432); Lesson 2, Building Number Concepts (439-440); Lesson 3, Building Number Concepts (448-452); Lesson 4,

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situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to *decontextualize*—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to *contextualize*, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.		(51-53); Lesson 7, Problem Solving (59-62); Lesson 8, Problem Solving (68-69); Lesson 9, Problem Solving (76-78); Lesson 10, Problem Solving (89-92) **Unit 2:** Lesson 6, Building Number Concepts (151-154) **Unit 7:** Lesson 1, Problem Solving (773-777); Lesson 2, Problem Solving (783-787); Lesson 3, Problem Solving (793-797); Lesson 4, Problem Solving (805-807); Lesson 6, Problem Solving (819-822); Lesson 7, Problem Solving (829-831); Lesson 8, Problem Solving (834-836); Lesson 9, Problem Solving (839-841); Lesson 10, Problem Solving (848-851)	Building Number Concepts (460-463); Lesson 5, Building Number Concepts (471-475); Lesson 6, Building Number Concepts (480-483); Lesson 7, Building Number Concepts (489-491); Lesson 8, Building Number Concepts (498-501); Lesson 9, Building Number Concepts (508-510); Lesson 10, Building Number Concepts (518-523)
CCSS.MATH.PRACTICE.MP3 Construct viable arguments and critique the reasoning of others. Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it		**Unit 1:** Lesson 1, Problem Solving (12-13); Lesson 2, Problem Solving (19-20); Lesson 3, Problem Solving (27-29); Lesson 4, Problem Solving (35-37); Lesson 6, Problem Solving (51-53); Lesson 7, Problem Solving (59-62); Lesson 8, Problem Solving (68-69); Lesson 9, Problem Solving (76-78); Lesson 10, Problem Solving (89-92) **Unit 2:** Lesson 3, Building Number Concepts (123-127); Lesson 4, Building Number Concepts (133-135); Lesson 5, Building Number Concepts (141-145); Lesson 6, Building Number Concepts (151-154); Lesson 14, Building Number Concepts (224-227); Lesson 15, Building Number Concepts (232-239); Lesson 1, Problem Solving (773-777); Lesson 2, Problem Solving (783-787); Lesson 3, Problem Solving (793-797); Lesson 4, Problem Solving (805-807);	

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is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.		Lesson 6, Problem Solving (819-822); Lesson 7, Problem Solving (829-831); Lesson 8, Problem Solving (834-836); Lesson 9, Problem Solving (839-841); Lesson 10, Problem Solving (848-851)	
CCSS.MATH.PRACTICE.MP4 Model with mathematics. Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results	**Unit 1:** Lesson 4, Problem Solving (36-38); Lesson 13, Problem Solving (104-105); Lesson 14, Problem Solving (108-110); Lesson 15, Problem Solving (117-120)	**Unit 1:** Lesson 1, Problem Solving (12-13); Lesson 2, Problem Solving (19-20); Lesson 3, Problem Solving (27-29); Lesson 4, Problem Solving (35-37); Lesson 6, Problem Solving (51-53); Lesson 7, Problem Solving (59-62); Lesson 8, Problem Solving (68-69); Lesson 9, Problem Solving (76-78); Lesson 10, Problem Solving (89-92)	**Unit 4:** Lesson 1, Building Number Concepts (429-432); Lesson 2, Building Number Concepts (439-440); Lesson 3, Building Number Concepts (448-452); Lesson 4, Building Number Concepts (460-463); Lesson 5, Building Number Concepts (471-475); Lesson 6, Building Number Concepts (480-483); Lesson 7, Building Number Concepts (489-491); Lesson 8, Building Number Concepts (498-501); Lesson 9, Building Number Concepts (508-510); Lesson 10, Building Number Concepts (518-523)

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make sense, possibly improving the model if it has not served its purpose.			
CCSS.MATH.PRACTICE.MP5 Use appropriate tools strategically. Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.	**Unit 1:** Lesson 8, Problem Solving (65-66); Lesson 9, Problem Solving (72-74)	**Unit 1:** Lesson 1, Problem Solving (12-13); Lesson 2, Problem Solving (19-20); Lesson 3, Problem Solving (27-29); Lesson 4, Problem Solving (35-37); Lesson 6, Problem Solving (51-53); Lesson 7, Problem Solving (59-62); Lesson 8, Problem Solving (68-69); Lesson 9, Problem Solving (76-78); Lesson 10, Problem Solving (89-92)	**Unit 4:** Lesson 1, Building Number Concepts (429-432); Lesson 2, Building Number Concepts (439-440); Lesson 3, Building Number Concepts (448-452); Lesson 4, Building Number Concepts (460-463); Lesson 5, Building Number Concepts (471-475); Lesson 6, Building Number Concepts (480-483); Lesson 7, Building Number Concepts (489-491); Lesson 8, Building Number Concepts (498-501); Lesson 9, Building Number Concepts (508-510); Lesson 10, Building Number Concepts (518-523)
CCSS.MATH.PRACTICE.MP6 Attend to precision. Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others		**Unit 1:** Lesson 1, Problem Solving (12-13); Lesson 2, Problem Solving (19-20); Lesson 3, Problem Solving (27-29); Lesson 4, Problem Solving (35-37); Lesson 6, Problem Solving (51-53);	**Unit 4:** Lesson 1, Building Number Concepts (429-432); Lesson 2, Building Number Concepts (439-440); Lesson 3, Building Number Concepts (448-452); Lesson 4, Building Number Concepts (460-463); Lesson

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and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.		Lesson 7, Problem Solving (59-62); Lesson 8, Problem Solving (68-69); Lesson 9, Problem Solving (76-78); Lesson 10, Problem Solving (89-92) **Unit 2:** Lesson 5, Building Number Concepts (141-145); Lesson 6, Building Number Concepts (151-154); Lesson 9, Building Number Concepts (180-184); Lesson 10, Building Number Concepts (189-193); Lesson 11, Building Number Concepts (198-201); Lesson 12, Building Number Concepts (207-210); Lesson 13, Building Number Concepts (215-219); Lesson 14, Building Number Concepts (224-227); Lesson 15, Building Number Concepts (232-239) **Unit 7:** Lesson 1, Problem Solving (773-777); Lesson 2, Problem Solving (783-787); Lesson 3, Problem Solving (793-797); Lesson 4, Problem Solving (805-807); Lesson 6, Problem Solving (819-822); Lesson 7, Problem Solving (829-831); Lesson 8, Problem Solving (834-836); Lesson 9, Problem Solving (839-841); Lesson 10, Problem Solving (848-851)	5, Building Number Concepts (471-475); Lesson 6, Building Number Concepts (480-483); Lesson 7, Building Number Concepts (489-491); Lesson 8, Building Number Concepts (498-501); Lesson 9, Building Number Concepts (508-510); Lesson 10, Building Number Concepts (518-523)
CCSS.MATH.PRACTICE.MP7 Look for and make use of structure. Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7 × 8 equals the well remembered 7 × 5 + 7 × 3, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2 × 7 and the 9 as 2 + 7. They recognize the significance of an existing line in a geometric figure and can use		**Unit 1:** Lesson 1, Problem Solving (12-13); Lesson 2, Problem Solving (19-20); Lesson 3, Problem Solving (27-29); Lesson 4, Problem Solving (35-37); Lesson 6, Problem Solving (51-53); Lesson 7, Problem Solving (59-62); Lesson 8, Problem Solving (68-69); Lesson 9, Problem Solving (76-78); Lesson 10, Problem Solving (89-92); **Unit 7:** Lesson 1, Problem Solving (773-777); Lesson 2, Problem Solving (783-787); Lesson 3, Problem Solving (793-797); Lesson 4, Problem Solving (805-807); Lesson 6, Problem Solving (819-822);	**Unit 4:** Lesson 1, Building Number Concepts (429-432); Lesson 2, Building Number Concepts (439-440); Lesson 3, Building Number Concepts (448-452); Lesson 4, Building Number Concepts (460-463); Lesson 5, Building Number Concepts (471-475); Lesson 6, Building Number Concepts (480-483); Lesson 7, Building Number Concepts (489-491); Lesson 8, Building Number Concepts (498-501); Lesson 9, Building Number Concepts (508-510); Lesson 10, Building Number Concepts (518-523)

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the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5 - 3(x - y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y.		Lesson 7, Problem Solving (829-831); Lesson 8, Problem Solving (834-836); Lesson 9, Problem Solving (839-841); Lesson 10, Problem Solving (848-851)	
CCSS.MATH.PRACTICE.MP8 Look for and express regularity in repeated reasoning. Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation $(y - 2)/(x - 1) = 3$. Noticing the regularity in the way terms cancel when expanding $(x - 1)(x + 1)$; $(x - 1)(x^2 + x + 1)$; and $(x - 1)(x^3 + x2 + x + 1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.		**Unit 1:** Lesson 1, Problem Solving (12-13); Lesson 2, Problem Solving (19-20); Lesson 3, Problem Solving (27-29); Lesson 4, Problem Solving (35-37); Lesson 6, Problem Solving (51-53); Lesson 7, Problem Solving (59-62); Lesson 8, Problem Solving (68-69); Lesson 9, Problem Solving (76-78); Lesson 10, Problem Solving (89-92); **Unit 7:** Lesson 1, Problem Solving (773-777); Lesson 2, Problem Solving (783-787); Lesson 3, Problem Solving (793-797); Lesson 4, Problem Solving (805-807); Lesson 6, Problem Solving (819-822); Lesson 7, Problem Solving (829-831); Lesson 8, Problem Solving (834-836); Lesson 9, Problem Solving (839-841); Lesson 10, Problem Solving (848-851)	**Unit 4:** Lesson 1, Building Number Concepts (429-432); Lesson 2, Building Number Concepts (439-440); Lesson 3, Building Number Concepts (448-452); Lesson 4, Building Number Concepts (460-463); Lesson 5, Building Number Concepts (471-475); Lesson 6, Building Number Concepts (480-483); Lesson 7, Building Number Concepts (489-491); Lesson 8, Building Number Concepts (498-501); Lesson 9, Building Number Concepts (508-510); Lesson 10, Building Number Concepts (518-523)