SADLIER
Progress in Mathematics

SADLIER
Common Core Progress Mathematics

Common Core State Standards for Mathematics

Grade 3 Crosswalk

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Skills Update—Review of Grade 2 Skills

Progress in Mathematics, Grade 3		Common Core Progress Mathematics, Grade 3		Common Core State Standards for Mathematics, Grade 3	
SU	**Expanded Form**—p. 1				
SU	**Count by 2s, 5s, 10s**—p. 2				
SU	**Money Less Than $1.00**—p. 3				
SU	**Addition Facts Through 18**—p. 4	**Lesson 14**	**Add and Subtract Fluently within 1000**—pp. 120–127	3.NBT.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.
SU	**Subtraction Facts Through 18**—p. 5				
SU	**Mental Math Strategies**—p. 6				
SU	**Patterns**—p. 7	**Lesson 12**	**Identify and Explain Arithmetic Patterns**—pp. 104–111	3.OA.9	Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.*
SU	**Fractions: Part of a Whole**—p. 8	**Lesson 16**	**Understand Unit Fractions as Quantities**—pp. 142–149	3.NF.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*.
		Lesson 17	**Understand Fractions as Quantities**—pp. 150–157		
		Lesson 36	**Partition Shapes to Make Equal Areas**—pp. 320–327	3.G.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.*
SU	**Fractions: Part of a Set**—p. 9				
SU	**Nonstandard Units**—p. 10				
SU	**Inch and Centimeter**—p. 11				

Skills Update—Review of Grade 2 Skills

Progress in Mathematics, Grade 3		Common Core Progress Mathematics, Grade 3		Common Core State Standards for Mathematics, Grade 3	
SU	**Cup, Pint, Quart**—p. 12	**Lesson 25**	**Problem Solving: Volumes and Masses**—pp. 226–233	3.MD.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] [6] Excludes compound units such as cm^3 and finding the geometric volume of a container. [7] Excludes multiplicative comparison problems (problems involving notions of "times as much."
SU	**Liter**—p. 13	**Lesson 32**	**Problem Solving: Measurement**—pp. 288–295		
SU	**Hour, Half Hour**—p. 14	**Lesson 24**	**Problem Solving: Time**—pp. 218–225	3.MD.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.
SU	**A.M., P.M.**—p. 15				
SU	**Sides and Vertices**—p. 16				
SU	**Solid Figures**—p. 17				
SU	**Venn Diagrams**—p. 18				
SU	**Read a Pictograph**—p. 19				
SU	**Read a Bar Graph**—p. 20				
SU	**Certain, Possible, Impossible Outcomes**—p. 21				

Chapter 1 Place Value

Progress in Mathematics, Grade 3		Common Core Progress Mathematics, Grade 3		Common Core State Standards for Mathematics, Grade 3	
1-1	**Hundreds**—pp. 30–31				
1-2	**Compare Numbers**—pp. 32–33				
1-3	**Order Numbers**—pp. 34–35				
1-4	**Counting Patterns**—pp. 36–37	**Lesson 12**	**Identify and Explain Arithmetic Patterns**—pp. 104–111	3.OA.9	Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.*
1-5	**What Is One Thousand?**—pp. 38–39				
1-6	**Thousands**—pp. 40–41				
1-7	**Ten Thousands and Hundred Thousands**—pp. 42–43				
1-8	**Compare and Order Larger Numbers**—pp. 44–45				
1-9	**Round Numbers**—pp. 46–47	**Lesson 13**	**Round Whole Numbers to the Nearest 10 or 100**—pp. 112–119	3.NBT.1	Use place value understanding to round whole numbers to the nearest 10 or 100.
1-10	**Coins and Bills**—pp. 48–49				
1-11	**Make and Count Change**—pp. 50–51				
1-12	**Compare and Round Money**—pp. 52–53				
1-13	**Problem Solving Strategy: Draw a Picture**—pp. 54–55				
1-14	**Problem Solving Applications: Mixed Review**—pp. 56–57				

Chapter 2 Addition

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
2-1 **More Than Two Addends**—pp. 64–65		
2-2 **Missing Addends**—pp. 66–67	**Lesson 10** **Problem Solving: Two-Step Problems**—pp. 88–95 **Lesson 11** **Problem Solving: Use Equations**—pp. 96–103	3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.[3] [3]This standard is limited to problems posed with whole numbers and having whole-number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order (Order of Operations).
2-3 **Add No Regrouping**—pp. 68–69	**Lesson 14** **Add and Subtract Fluently within 1000**—pp. 120–127	3.NBT.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.
2-4 **Estimate Sums**—pp. 70–71	**Lesson 13** **Round Whole Numbers to the Nearest 10 or 100**—pp. 112–119	3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100.
2-5 **Add with Regrouping**—pp. 72–73	**Lesson 13** **Round Whole Numbers to the Nearest 10 or 100**—pp. 112–119	3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100.
	Lesson 14 **Add and Subtract Fluently within 1000**—pp. 120–127	3.NBT.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.
2-6 **Regroup Tens**—p. 74 **2-7** **Add Regroup Tens**—p. 75	**Lesson 14** **Add and Subtract Fluently within 1000**—pp. 120–127	3.NBT.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.
2-8 **Add Regroup Twice**—pp. 76–77	**Lesson 13** **Round Whole Numbers to the Nearest 10 or 100**—pp. 112–119	3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100.
	Lesson 14 **Add and Subtract Fluently within 1000**—pp. 120–127	3.NBT.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.

Chapter 2 Addition

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
***2-8A** **Addition Properties**—Online	**Lesson 14** **Add and Subtract Fluently within 1000**—pp. 120–127	3.NBT.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.
2-9 **Three-Digit Addition**—pp. 78–79	**Lesson 13** **Round Whole Numbers to the Nearest 10 or 100**—pp. 112–119	3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100.
	Lesson 14 **Add and Subtract Fluently within 1000**—pp. 120–127	3.NBT.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.
2-10 **More Regrouping in Addition**—pp. 80–81	**Lesson 14** **Add and Subtract Fluently within 1000**—pp. 120–127	3.NBT.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.
2-11 **Mental Math**—pp. 82–83		
2-12 **Regroup Hundreds as Thousands**—pp. 84–85		
2-13 **Three or More Addends**—pp. 86–87	**Lesson 13** **Round Whole Numbers to the Nearest 10 or 100**—pp. 112–119	3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100.
2-14 **Add Larger Numbers**—pp. 88–89		
2-15 **Problem Solving Strategy: Use Simpler Numbers**—pp. 90–91	**Lesson 10** **Problem Solving: Two-Step Problems**—pp. 88–95	3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.[3] [3]This standard is limited to problems posed with whole numbers and having whole-number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order (Order of Operations).
	Lesson 11 **Problem Solving: Use Equations**—pp. 96–103	
	Lesson 13 **Round Whole Numbers to the Nearest 10 or 100**—pp. 112–119	3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100.
2-16 **Problem Solving Applications: Mixed Review**—pp. 92–93	**Lesson 10** **Problem Solving: Two-Step Problems**—pp. 88–95	3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the
	Lesson 11 **Problem Solving: Use Equations**—pp. 96–103	

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Chapter 2 Addition

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
		– continued from previous page – unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.[3] [3]This standard is limited to problems posed with whole numbers and having whole-number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order (Order of Operations).

Chapter 3 Subtraction

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
3-1 **Subtraction Concepts**—pp. 100–101		
3-2 **Subtract: No Regrouping**—pp. 102–103	**Lesson 10** **Problem Solving: Two-Step Problems**—pp. 88–95 **Lesson 11** **Problem Solving: Use Equations**—pp. 96–103	3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.[3] [3]This standard is limited to problems posed with whole numbers and having whole-number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order (Order of Operations).
3-3 **Estimate Differences**—pp. 104–105 **3-4** **Subtract with Regrouping**—pp. 106–107	**Lesson 13** **Round Whole Numbers to the Nearest 10 or 100**—pp. 112–119 **Lesson 14** **Add and Subtract Fluently within 1000**—pp. 120–127	3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100. 3.NBT.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.

Chapter 3 Subtraction

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
3-5 Regroup Hundreds and Dollars—pp. 108–109	**Lesson 14 Add and Subtract Fluently within 1000**—pp. 120–127	3.NBT.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.
3-6 Regroup Once in Subtraction—pp. 110–111	**Lesson 13 Round Whole Numbers to the Nearest 10 or 100**—pp. 112–119	3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100.
	Lesson 14 Add and Subtract Fluently within 1000—pp. 120–127	3.NBT.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.
3-7 Regroup Twice in Subtraction—pp. 112–113	**Lesson 10 Problem Solving: Two-Step Problems**—pp. 88–95	3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.[3] [3]This standard is limited to problems posed with whole numbers and having whole-number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order (Order of Operations).
	Lesson 11 Problem Solving: Use Equations—pp. 96–103	
	Lesson 13 Round Whole Numbers to the Nearest 10 or 100—pp. 112–119	3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100.
	Lesson 14 Add and Subtract Fluently within 1000—pp. 120–127	3.NBT.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.
3-8 Regroup with Zeros—pp. 114–115	**Lesson 13 Round Whole Numbers to the Nearest 10 or 100**—pp. 112–119	3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100.
	Lesson 14 Add and Subtract Fluently within 1000—pp. 120–127	3.NBT.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.

Chapter 3 Subtraction

Progress in Mathematics, Grade 3		Common Core Progress Mathematics, Grade 3		Common Core State Standards for Mathematics, Grade 3	
3-9	**Regroup Thousands as Hundreds**—pp. 116–117				
3-10	**Subtract Larger Numbers**—pp. 118–119	**Lesson 13**	**Round Whole Numbers to the Nearest 10 or 100**—pp. 112–119	3.NBT.1	Use place value understanding to round whole numbers to the nearest 10 or 100.
3-11	**Choose a Computation Method**—pp. 120–121				
3-12	**Problem Solving Strategy: Choose the Operation**—pp. 122–123	**Lesson 10**	**Problem Solving: Two-Step Problems**—pp. 88–95	3.OA.8	Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.[3] [3]This standard is limited to problems posed with whole numbers and having whole-number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order (Order of Operations).
		Lesson 11	**Problem Solving: Use Equations**—pp. 96–103		
		Lesson 13	**Round Whole Numbers to the Nearest 10 or 100**—pp. 112–119	3.NBT.1	Use place value understanding to round whole numbers to the nearest 10 or 100.
***3-12A**	**Missing Operands**—Online	**Lesson 14**	**Add and Subtract Fluently within 1000**—pp. 120–127	3.NBT.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.
3-13	**Problem Solving Applications: Mixed Review**—pp. 124–125	**Lesson 10**	**Problem Solving: Two-Step Problems**—pp. 88–95	3.OA.8	Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.[3] [3]This standard is limited to problems posed with whole numbers and having whole-number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order (Order of Operations).
		Lesson 11	**Problem Solving: Use Equations**—pp. 96–103		

Chapter 4 Multiplication Concepts and Facts

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
4-1 Understand Multiplication—pp. 132–133	**Lesson 1 Interpret Products of Whole Numbers**—pp. 10–17	3.OA.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.*
4-2 One and Zero as Factors—pp. 134–135	**Lesson 1 Interpret Products of Whole Numbers**—pp. 10–17	3.OA.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.*
	Lesson 6 Apply Commutative and Associative Properties to Multiply—pp. 50–57 **Lesson 7 Apply the Distributive Property to Multiply**—pp. 58–65	3.OA.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 × 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.)* [2]Students need not use formal terms for these properties.
4-3 Multiply Twos—pp. 136–137 **4-4 Multiply Threes**—pp. 138–139 **4-5 Multiply Fours**—pp. 140–141 **4-6 Multiply Fives**—pp. 142–143	**Lesson 1 Interpret Products of Whole Numbers**—pp. 10–17	3.OA.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.*
	Lesson 3 Problem Solving: Multiplication/Division and Equal Groups—pp. 26–33 **Lesson 4 Problem Solving: Multiplication/Division and Arrays**—pp. 34–41 **Lesson 32 Problem Solving: Measurement**—pp. 288–295	3.OA.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.

Chapter 4 Multiplication Concepts and Facts

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
	Lesson 12 **Identify and Explain Arithmetic Patterns**—pp. 104–111	3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.*
***4-6A** **Multiplication and Arrays**—Online	**Lesson 1** **Interpret Products of Whole Numbers**—pp. 10–17	3.OA.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.*
	Lesson 3 **Problem Solving: Multiplication/Division and Equal Groups**—pp. 26–33 **Lesson 4** **Problem Solving: Multiplication/Division and Arrays**—pp. 34–41 **Lesson 32** **Problem Solving: Measurement**—pp. 288–295	3.OA.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.
***4-6B** **Use a Bar Diagram to Multiply**—Online	**Lesson 3** **Problem Solving: Multiplication/Division and Equal Groups**—pp. 26–33 **Lesson 4** **Problem Solving: Multiplication/Division and Arrays**—pp. 34–41 **Lesson 32** **Problem Solving: Measurement**—pp. 288–295	3.OA.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.
***4-6C** **Multiplication Stories**—Online	**Lesson 10** **Problem Solving: Two-Step Problems**—pp. 88–95 **Lesson 11** **Problem Solving: Use Equations**—pp. 96–103	3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.[3] [3]This standard is limited to problems posed with whole numbers and having whole-number answers; *– continued on next page –*

Chapter 4 Multiplication Concepts and Facts

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
		– continued from previous page – students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order (Order of Operations).
4-7 **Multiply Cents**—pp. 144–145	**Lesson 1** **Interpret Products of Whole Numbers**—pp. 10–17	3.OA.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.*
	Lesson 3 **Problem Solving: Multiplication/Division and Equal Groups**—pp. 26–33 **Lesson 4** **Problem Solving: Multiplication/Division and Arrays**—pp. 34–41 **Lesson 32** **Problem Solving: Measurement**—pp. 288–295	3.OA.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.
4-8 **Sums, Differences, and Products**—pp. 146–147	**Lesson 10** **Problem Solving: Two-Step Problems**—pp. 88–95 **Lesson 11** **Problem Solving: Use Equations**—pp. 96–103	3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.[3] [3]This standard is limited to problems posed with whole numbers and having whole-number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order (Order of Operations).
4-9 **Order in Multiplication**—pp. 148–149	**Lesson 6** **Apply Commutative and Associative Properties to Multiply**—pp. 50–57 **Lesson 7** **Apply the Distributive Property to Multiply**—pp. 58–65	3.OA.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 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 =* – continued on next page –

Chapter 4 Multiplication Concepts and Facts

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
		– continued from previous page – *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.)* [2]Students need not use formal terms for these properties.
4-10 **Missing Factors**—pp. 150–151	**Lesson 5** **Find Unknown Numbers in Multiplication and Division Equations**—pp. 42–49	3.OA.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 = ?.*
	Lesson 8 **Divide by Finding an Unknown Factor**—pp. 66–73	3.OA.6 Understand division as an unknown-factor problem. *For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8. Multiply and divide within 100.*
4-11 **Problem Solving Strategy: Use More Than One Step**—pp. 152–153	**Lesson 10** **Problem Solving: Two-Step Problems**—pp. 88–95	3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.[3] [3]This standard is limited to problems posed with whole numbers and having whole-number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order (Order of Operations).

Chapter 4 Multiplication Concepts and Facts

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
4-12 **Problem Solving Applications: Mixed Review**—pp. 154–155	**Lesson 3** **Problem Solving: Multiplication/Division and Equal Groups**—pp. 26–33 **Lesson 4** **Problem Solving: Multiplication/Division and Arrays**—pp. 34–41 **Lesson 32** **Problem Solving: Measurement**—pp. 288–295	3.OA.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.

Chapter 5 Division Concepts and Facts

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
5-1 **Understand Division**—pp. 162–163	**Lesson 2** **Interpret Quotients of Whole Numbers**—pp. 18–26	3.OA.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 a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.*
	Lesson 3 **Problem Solving: Multiplication/Division and Equal Groups**—pp. 26–33 **Lesson 4** **Problem Solving: Multiplication/Division and Arrays**—pp. 34–41 **Lesson 32** **Problem Solving: Measurement**—pp. 288–295	3.OA.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.
5-2 **One and Zero in Division**—pp. 164–165	**Lesson 2** **Interpret Quotients of Whole Numbers**—pp. 18–26	3.OA.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.

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Chapter 5 Division Concepts and Facts

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
		– continued from previous page – *For example, describe a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.*
5-3 **Divide by 2**—pp. 166–167 **5-4** **Divide by 3**—pp. 168–169 **5-5** **Divide by 4**—pp. 170–171 **5-6** **Divide by 5**—pp. 172–173	**Lesson 2** **Interpret Quotients of Whole Numbers**—pp. 18–26	3.OA.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 a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.*
	Lesson 3 **Problem Solving: Multiplication/Division and Equal Groups**—pp. 26–33 **Lesson 4** **Problem Solving: Multiplication/Division and Arrays**—pp. 34–41 **Lesson 32** **Problem Solving: Measurement**—pp. 288–295	3.OA.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.
	Lesson 12 **Identify and Explain Arithmetic Patterns**—pp. 104–111	3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.*
***5-6A** **Division Stories**—Online	**Lesson 2** **Interpret Quotients of Whole Numbers**—pp. 18–26	3.OA.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

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Chapter 5 Division Concepts and Facts

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
		– continued from previous page – partitioned into equal shares of 8 objects each. *For example, describe a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.*
	Lesson 3 **Problem Solving: Multiplication/Division and Equal Groups**—pp. 26–33 **Lesson 4** **Problem Solving: Multiplication/Division and Arrays**—pp. 34–41 **Lesson 32** **Problem Solving: Measurement**—pp. 288–295	3.OA.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.
5-7 **Relate Multiplication and Division**—pp. 174–175	**Lesson 8** **Divide by Finding an Unknown Factor**—pp. 66–73	3.OA.6 Understand division as an unknown-factor problem. *For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8. Multiply and divide within 100.*
	Lesson 9 **Multiply and Divide Fluently within 100**—pp. 80–87	3.OA.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. Solve problems involving the four operations, and identify and explain patterns in arithmetic.
5-8 **Divide Cents**—pp. 176–177	**Lesson 2** **Interpret Quotients of Whole Numbers**—pp. 18–26	3.OA.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. – continued on next page –

Chapter 5 Division Concepts and Facts

Progress in Mathematics, Grade 3		Common Core Progress Mathematics, Grade 3		Common Core State Standards for Mathematics, Grade 3	
					– continued from previous page – *For example, describe a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.*
		Lesson 3	**Problem Solving: Multiplication/Division and Equal Groups**—pp. 26–33	3.OA.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.
		Lesson 4	**Problem Solving: Multiplication/Division and Arrays**—pp. 34–41		
		Lesson 32	**Problem Solving: Measurement**—pp. 288–295		
5-9	**Function Machines**—pp. 178–179				
5-10	**Problem Solving Strategy: Write a Number Sentence**—pp. 180–181	**Lesson 3**	**Problem Solving: Multiplication/Division and Equal Groups**—pp. 26–33	3.OA.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.
5-11	**Problem Solving Applications: Mixed Review**—pp. 182–183	**Lesson 4**	**Problem Solving: Multiplication/Division and Arrays**—pp. 34–41		
		Lesson 32	**Problem Solving: Measurement**—pp. 288–295		

Chapter 6 More Multiplication and Division Facts

Progress in Mathematics, Grade 3		Common Core Progress Mathematics, Grade 3		Common Core State Standards for Mathematics, Grade 3	
6-1	**Factors and Products**—p. 190	**Lesson 1**	**Interpret Products of Whole Numbers**—pp. 10–17	3.OA.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.*

Chapter 6 More Multiplication and Division Facts

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
6-2 **Multiply Sixes**—p. 191	**Lesson 1** **Interpret Products of Whole Numbers**—pp. 10–17	3.OA.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.*
6-3 **Multiply Sevens**—pp. 192–193	**Lesson 12** **Identify and Explain Arithmetic Patterns**—pp. 104–111	3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.*
6-4 **Multiply Eights**—pp. 194–195	**Lesson 1** **Interpret Products of Whole Numbers**—pp. 10–17	3.OA.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.*
	Lesson 3 **Problem Solving: Multiplication/Division and Equal Groups**—pp. 26–33 **Lesson 4** **Problem Solving: Multiplication/Division and Arrays**—pp. 34–41 **Lesson 32** **Problem Solving: Measurement**—pp. 288–295	3.OA.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.
	Lesson 10 **Problem Solving: Two-Step Problems**—pp. 88–95	3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.[3] [3]This standard is limited to problems posed with whole numbers and having whole-number answers;

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Chapter 6 More Multiplication and Division Facts

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
		– continued from previous page – students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order (Order of Operations).
	Lesson 12 **Identify and Explain Arithmetic Patterns**—pp. 104–111	3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.*
6-5 **Multiply Nines**—pp. 196–197	**Lesson 1** **Interpret Products of Whole Numbers**—pp. 10–17	3.OA.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.*
	Lesson 12 **Identify and Explain Arithmetic Patterns**—pp. 104–111	3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.*
***6-5A** **Break Apart Numbers to Multiply**—Online	**Lesson 3** **Problem Solving: Multiplication/Division and Equal Groups**—pp. 26–33 **Lesson 4** **Problem Solving: Multiplication/Division and Arrays**—pp. 34–41 **Lesson 32** **Problem Solving: Measurement**—pp. 288–295	3.OA.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.

Chapter 6 More Multiplication and Division Facts

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
	Lesson 6 **Apply Commutative and Associative Properties to Multiply**—pp. 50–57	3.OA.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 × 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.)* [2]Students need not use formal terms for these properties.
	Lesson 7 **Apply the Distributive Property to Multiply**—pp. 58–65	
***6-5B** **Multiplication Tables**—Online	**Lesson 9** **Multiply and Divide Fluently within 100**—pp. 80–87	3.OA.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. Solve problems involving the four operations, and identify and explain patterns in arithmetic.
	Lesson 12 **Identify and Explain Arithmetic Patterns**—pp. 104–111	3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.*
6-6 **Multiply Three Numbers**—pp. 198–199	**Lesson 6** **Apply Commutative and Associative Properties to Multiply**—pp. 50–57	3.OA.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 × 5 =*
	Lesson 7 **Apply the Distributive Property to Multiply**—pp. 58–65	

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Chapter 6 More Multiplication and Division Facts

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
		– continued from previous page – *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.)* [2]Students need not use formal terms for these properties.
6-7 **Division Review**—pp. 200–201	**Lesson 2** **Interpret Quotients of Whole Numbers**—pp. 18–26	3.OA.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 a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.*
	Lesson 6 **Apply Commutative and Associative Properties to Multiply**—pp. 50–57 **Lesson 7** **Apply the Distributive Property to Multiply**—pp. 58–65	3.OA.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 × 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.)* [2]Students need not use formal terms for these properties.
	Lesson 9 **Multiply and Divide Fluently within 100**—pp. 80–87	3.OA.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that – continued on next page –

Chapter 6 More Multiplication and Division Facts

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
		– continued from previous page – $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers. Solve problems involving the four operations, and identify and explain patterns in arithmetic.
6-8 **Divide by 6**—pp. 202–203 **6-9** **Divide by 7**—pp. 204–205 **6-10** **Divide by 8**—pp. 206–207 **6-11** **Divide by 9**—pp. 208–209	**Lesson 2** **Interpret Quotients of Whole Numbers**—pp. 18–26	3.OA.2 Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ 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 a context in which a number of shares or a number of groups can be expressed as $56 \div 8$.*
	Lesson 12 **Identify and Explain Arithmetic Patterns**—pp. 104–111	3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.*
6-12 **Operation Patterns**—pp. 210–211	**Lesson 12** **Identify and Explain Arithmetic Patterns**—pp. 104–111	3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.*

Chapter 6 More Multiplication and Division Facts

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
***6-12A** **Missing Operands: Multiplication & Division**—Online	**Lesson 3** **Problem Solving: Multiplication/Division and Equal Groups**—pp. 26–33 **Lesson 4** **Problem Solving: Multiplication/Division and Arrays**—pp. 34–41 **Lesson 32** **Problem Solving: Measurement**—pp. 288–295	3.OA.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.
	Lesson 5 **Find Unknown Numbers in Multiplication and Division Equations**—pp. 42–49	3.OA.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 = ?.*
6-13 **Fact Families**—pp. 212–213	**Lesson 5** **Find Unknown Numbers in Multiplication and Division Equations**—pp. 42–49	3.OA.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 = ?.*
	Lesson 6 **Apply Commutative and Associative Properties to Multiply**—pp. 50–57 **Lesson 7** **Apply the Distributive Property to Multiply**—pp. 58–65	3.OA.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 × 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.)* [2]Students need not use formal terms for these properties.

Chapter 6 More Multiplication and Division Facts

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
	Lesson 8 **Divide by Finding an Unknown Factor**—pp. 66–73	3.OA.6 Understand division as an unknown-factor problem. *For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8. Multiply and divide within 100.*
	Lesson 9 **Multiply and Divide Fluently within 100**—pp. 80–87	3.OA.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. Solve problems involving the four operations, and identify and explain patterns in arithmetic.
6-14 **Apply Facts**—pp. 214–215	**Lesson 3** **Problem Solving: Multiplication/Division and Equal Groups**—pp. 26–33 **Lesson 4** **Problem Solving: Multiplication/Division and Arrays**—pp. 34–41 **Lesson 32** **Problem Solving: Measurement**—pp. 288–295	3.OA.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.
***6-14A** **Checking Reasonableness of Answers**—Online ***6-14B** **Writing Variable Expressions**—Online	**Lesson 10** **Problem Solving: Two-Step Problems**—pp. 88–95	3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.[3] [3]This standard is limited to problems posed with whole numbers and having whole-number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order (Order of Operations).

Chapter 6 More Multiplication and Division Facts

Progress in Mathematics, Grade 3		Common Core Progress Mathematics, Grade 3		Common Core State Standards for Mathematics, Grade 3	
6-15	**Problem Solving Strategy: Guess and Test**—pp. 216–217	**Lesson 3**	**Problem Solving: Multiplication/Division and Equal Groups**—pp. 26–33	3.OA.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.
6-16	**Problem Solving Applications: Mixed Review**—pp. 218–219	**Lesson 4**	**Problem Solving: Multiplication/Division and Arrays**—pp. 34–41		
		Lesson 32	**Problem Solving: Measurement**—pp. 288–295		
		Lesson 10	**Problem Solving: Two-Step Problems**—pp. 88–95	3.OA.8	Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.[3] [3]This standard is limited to problems posed with whole numbers and having whole-number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order (Order of Operations).

Chapter 7 Statistics and Probability

Progress in Mathematics, Grade 3		Common Core Progress Mathematics, Grade 3		Common Core State Standards for Mathematics, Grade 3	
7-1	**Pictographs**—pp. 226–227	**Lesson 26**	**Draw Graphs to Represent Categorical Data**—pp. 234–241	3.MD.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.*
7-2	**Bar Graphs**—pp. 228–229				
***7-2A**	**Data and Two-Step Problems**—Online				
7-3	**Surveys**—pp. 230–231				
7-4	**Circle Graphs**—pp. 232–233				
7-5	**Line Plots**—pp. 234–235				

Chapter 7 Statistics and Probability

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
7-6 **Line Graphs**—pp. 236–237	**Lesson 26** **Draw Graphs to Represent Categorical Data**—pp. 234–241	3.MD.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.*
7-7 **Median and Mean**—pp. 238–239		
7-8 **Compare Data**—pp. 240–241	**Lesson 26** **Draw Graphs to Represent Categorical Data**—pp. 234–241	3.MD.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.*
7-9 **Arrangements and Combinations**—pp. 242–243		
7-10 **Probability Experiments Events and Outcomes**—pp. 244–245		
7-11 **Graph Results of Probability Experiments**—pp. 246–247		
7-12 **Make Predictions**—pp. 248–249		
7-13 **Problem Solving Strategy: Use a Graph**—pp. 250–251	**Lesson 26** **Draw Graphs to Represent Categorical Data**—pp. 234–241	3.MD.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.*
7-14 **Problem Solving Applications: Mixed Review**—pp. 252–253		

Chapter 8 Measurement and Time

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
8-1 **Quarter Inch, Half Inch, Inch**—pp. 260–261	**Lesson 27** **Generate and Graph Measurement Data**—pp. 242–249	3.MD.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.
8-2 **Foot, Yard**—pp. 262–263		
8-3 **Mile**—pp. 264–265		
8-4 **Customary Units of Capacity**—pp. 266–267		
8-5 **Ounce, Pound**—pp. 268–269		
8-6 **Metric Units of Length**—pp. 270–271		
8-7 **Meter**—pp. 272–273		
8-8 **Kilometer**—pp. 274–275		
8-9 **Milliliter, Liter**—pp. 276–277	**Lesson 25** **Problem Solving: Volumes and Masses**—pp. 226–233	3.MD.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 such as a beaker with a measurement scale) to represent the problem.[7] [6] Excludes compound units such as cm^3 and finding the geometric volume of a container. [7] Excludes multiplicative comparison problems (problems involving notions of "times as much."
8-10 **Gram, Kilogram**—pp. 278–279	**Lesson 32** **Problem Solving: Measurement**—pp. 288–295	
***8-10A** **Estimate and Measure Masses**—Online		
8-11 **Rename Units of Measure**—pp. 280–281	**Lesson 3** **Problem Solving: Multiplication/Division and Equal Groups**—pp. 26–33	3.OA.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.
	Lesson 4 **Problem Solving: Multiplication/Division and Arrays**—pp. 34–41	
	Lesson 32 **Problem Solving: Measurement**—pp. 288–295	

Chapter 8 Measurement and Time

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
	Lesson 10 **Problem Solving: Two-Step Problems**—pp. 88–95	3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.[3] [3]This standard is limited to problems posed with whole numbers and having whole-number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order (Order of Operations).
	Lesson 25 **Problem Solving: Volumes and Masses**—pp. 226–233 **Lesson 32** **Problem Solving: Measurement**—pp. 288–295	3.MD.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 such as a beaker with a measurement scale) to represent the problem.[7] [6]Excludes compound units such as cm^3 and finding the geometric volume of a container. [7]Excludes multiplicative comparison problems (problems involving notions of "times as much."
8-12 **Choose the Measuring Tool**—pp. 282–283		
***8-12A** **Collect and Represent Data**—Online	**Lesson 27** **Generate and Graph Measurement Data**—pp. 242–249	3.MD.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.
8-13 **Temperature**—pp. 284–285		
8-14 **Quarter Hour**—pp. 286–287		

Chapter 8 Measurement and Time

Progress in Mathematics, Grade 3		Common Core Progress Mathematics, Grade 3		Common Core State Standards for Mathematics, Grade 3	
8-15	**Minutes**—pp. 288–289	**Lesson 24**	**Problem Solving: Time**—pp. 218–225	3.MD.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.
8-16	**Elapsed Time**—pp. 290–291				
***8-16A**	**Time on a Number Line**—Online				
8-17	**Calendar**—pp. 292–293				
8-18	**Problem Solving Strategy: Make a Table**—pp. 294–295				
8-19	**Problem Solving Applications: Mixed Review**—pp. 296–297	**Lesson 25**	**Problem Solving: Volumes and Masses**—pp. 226–233	3.MD.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 such as a beaker with a measurement scale) to represent the problem.[7] [6] Excludes compound units such as cm^3 and finding the geometric volume of a container. [7] Excludes multiplicative comparison problems (problems involving notions of "times as much."
		Lesson 32	**Problem Solving: Measurement**—pp. 288–295		

Chapter 9 Geometry

Progress in Mathematics, Grade 3		Common Core Progress Mathematics, Grade 3		Common Core State Standards for Mathematics, Grade 3	
9-1	**Lines**—pp. 304–305				
9-2	**Angles**—pp. 306–307				
9-3	**Polygons and Circles**—pp. 308–309	**Lesson 35**	**Understand Shapes and Attributes**—pp. 312–319	3.G.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.
9-4	**Triangles**—pp. 310–311				
***9-4A**	**Quadrilaterals**—Online				

Chapter 9 Geometry

Progress in Mathematics, Grade 3		Common Core Progress Mathematics, Grade 3		Common Core State Standards for Mathematics, Grade 3	
9-5	**Congruent and Similar Figures**—pp. 312–313				
9-6	**Ordered Pairs**—pp. 314–315				
9-7	**Symmetry**—p. 316	**Lesson 36**	**Partition Shapes to Make Equal Areas**—pp. 320–327	3.G.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.*
9-8	**Transformations**—p. 317				
9-9	**Solid Figures**—pp. 318–319				
9-10	**Perimeter**—pp. 320–321	**Lesson 33**	**Problem Solving: Perimeter**—pp. 296–303	3.MD.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.
		Lesson 34	**Problem Solving: Compare Perimeter and Area**—pp. 304–311		
9-11	**Area**—pp. 322–323	**Lesson 28**	**Understand Concepts of Area Measurement**—pp. 256–263	3.MD.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.
***9-11A**	**Area of a Rectangle**—Online			3.MD.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.
				3.MD.6	Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).

Chapter 9 Geometry

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3	
	Lesson 29 **Find Areas of Rectangles: Tile and Multiply**—pp. 264–271	3.MD.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.
		3.MD.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.
	Lesson 33 **Problem Solving: Perimeter**—pp. 296–303 **Lesson 34** **Problem Solving: Compare Perimeter and Area**—pp. 304–311	3.MD.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.
***9-11B** **Area of Composite Shapes**—Online	**Lesson 29** **Find Areas of Rectangles: Tile and Multiply**—pp. 264–271	3.MD.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.
	Lesson 30 **Find Areas of Rectangles: Use the Distributive Property**—pp. 272–279 **Lesson 32** **Problem Solving: Measurement**—pp. 288–295	3.MD.7c	Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.
	Lesson 31 **Find Areas: Decompose Figures into Rectangles**—pp. 280–287 **Lesson 32** **Problem Solving: Measurement**—pp. 288–295	3.MD.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.

Chapter 9 Geometry

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
	Lesson 33 **Problem Solving: Perimeter**—pp. 296–303 **Lesson 34** **Problem Solving: Compare Perimeter and Area**—pp. 304–311	3.MD.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.
***9-11C** **Perimeter and Area**—Online ***9-11D** **Missing Dimensions**—Online	**Lesson 33** **Problem Solving: Perimeter**—pp. 296–303 **Lesson 34** **Problem Solving: Compare Perimeter and Area**—pp. 304–311	3.MD.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.
9-12 **Volume**—pp. 324–325 ***9-12A** **Estimate and Measure Volume**—Online	**Lesson 25** **Problem Solving: Volumes and Masses**—pp. 226–233 **Lesson 32** **Problem Solving: Measurement**—pp. 288–295	3.MD.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 such as a beaker with a measurement scale) to represent the problem.[7] [6] Excludes compound units such as cm^3 and finding the geometric volume of a container. [7] Excludes multiplicative comparison problems (problems involving notions of "times as much."
***9-12B** **Measurement Problems**—Online	**Lesson 3** **Problem Solving: Multiplication/Division and Equal Groups**—pp. 26–33 **Lesson 4** **Problem Solving: Multiplication/Division and Arrays**—pp. 34–41 **Lesson 32** **Problem Solving: Measurement**—pp. 288–295	3.OA.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.

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Chapter 9 Geometry

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
	Lesson 25 **Problem Solving: Volumes and Masses**—pp. 226–233 **Lesson 32** **Problem Solving: Measurement**—pp. 288–295	3.MD.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 such as a beaker with a measurement scale) to represent the problem.[7] [6] Excludes compound units such as cm^3 and finding the geometric volume of a container. [7] Excludes multiplicative comparison problems (problems involving notions of "times as much."
9-13 **Problem Solving Strategy: Solve a Simpler Problem**—pp. 326–327	**Lesson 31** **Find Areas: Decompose Figures into Rectangles**—pp. 280–287 **Lesson 32** **Problem Solving: Measurement**—pp. 288–295	3.MD.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.
9-14 **Problem Solving Applications: Mixed Review**—pp. 328–329	**Lesson 35** **Understand Shapes and Attributes**—pp. 312–319	3.G.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.

Chapter 10 Multiply by One Digit

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
10-1 **Multiplication Patterns**—pp. 336–337 ***10-1A** **Multiply with Multiples**—Online	**Lesson 12** **Identify and Explain Arithmetic Patterns**—pp. 104–111	3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.*

Chapter 10 Multiply by One Digit

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
	Lesson 15 **Multiply One-Digit Whole Numbers by Multiples of 10**—pp. 128–135	3.NBT.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.
10-2 **Estimate Products**—pp. 338–339	**Lesson 13** **Round Whole Numbers to the Nearest 10 or 100**—pp. 112–119	3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100.
	Lesson 15 **Multiply One-Digit Whole Numbers by Multiples of 10**—pp. 128–135	3.NBT.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.
10-3 **Multiply Two Digits**—pp. 340–341		
10-4 **Multiply with Models**—pp. 342–343	**Lesson 5** **Find Unknown Numbers in Multiplication and Division Equations**—pp. 42–49	3.OA.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 = ?.*
10-5 **Multiply with Regrouping**—pp. 344–345		
10-6 **More Multiplying with Regrouping**—pp. 346–347		
10-7 **Multiply Three Digits**—pp. 348–349		
10-8 **Regroup in Multiplication**—pp. 350–351		
10-9 **Regroup Twice in Multiplication**—pp. 352–353		
10-10 **Problem Solving Strategy: Work Backward**—pp. 354–355		
10-11 **Problem Solving Applications: Mixed Review**—pp. 356–357		

Chapter 11 Divide by One Digit

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
11-1 **Division Sense**—pp. 364–365		
11-2 **Division with Remainders**—pp. 366–367		
11-3 **One-Digit Quotients**—pp. 368–369		
11-4 **Two-Digit Quotients**—pp. 370–371		
11-5 **Quotients with Remainders**—pp. 372–373		
11-6 **Estimate Quotients**—pp. 374–375		
11-7 **Problem Solving Strategy: Interpret the Remainder**—pp. 376–377		
11-8 **Problem Solving Applications: Mixed Review**—pp. 378–379		

Chapter 12 Fractions

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
12-1 **Fractions**—pp. 386–387	**Lesson 16** **Understand Unit Fractions as Quantities**—pp. 142–149	3.NF.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*.
	Lesson 17 **Understand Fractions as Quantities**—pp. 150–157	
	Lesson 36 **Partition Shapes to Make Equal Areas**—pp. 320–327	3.G.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.*
***12-1A** **Use Fractions**—Online	**Lesson 36** **Partition Shapes to Make Equal Areas**—pp. 320–327	3.G.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.*

Chapter 12 Fractions

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3	
***12-1B Unit Fractions on a Number Line**—Online	**Lesson 18 Understand Fractions on the Number Line**—pp. 158–165	3.NF.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.
		3.NF.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.
***12-1C Fractions on a Number Line**—Online	**Lesson 16 Understand Unit Fractions as Quantities**—pp. 142–149	3.NF.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*.
	Lesson 17 Understand Fractions as Quantities—pp. 150–157		
	Lesson 18 Understand Fractions on the Number Line—pp. 158–165	3.NF.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.
12-2 Equivalent Fractions—pp. 388–389	**Lesson 19 Understand Equivalent Fractions**—pp. 166–173	3.NF.3a	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.
	Lesson 20 Write Equivalent Fractions—pp. 174–181	3.NF.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.

Chapter 12 Fractions

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3	
	Lesson 22 **Compare Fractions: Same Denominator**—pp. 190–197	3.NF.3d	Compare two fractions with the same numerator or the same denominator by reasoning about their size. 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.
	Lesson 23 **Compare Fractions: Same Numerator**—pp. 198–205		
***12-2A** **Model Equivalent Fractions**—Online	**Lesson 19** **Understand Equivalent Fractions**—pp. 166–173	3.NF.3a	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.
	Lesson 20 **Write Equivalent Fractions**—pp. 174–181	3.NF.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.
	Lesson 21 **Relate Whole Numbers and Fractions**—pp. 182–189	3.NF.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.*
12-3 **Estimate Fractions**—pp. 390–391			
***12-3A** **Compare Like Fractions Using Models**—Online	**Lesson 22** **Compare Fractions: Same Denominator**—pp. 190–197	3.NF.3d	Compare two fractions with the same numerator or the same denominator by reasoning about their size. 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.
	Lesson 23 **Compare Fractions: Same Numerator**—pp. 198–205		

Chapter 12 Fractions

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3	
12-4 **Compare Fractions**—pp. 392–393	**Lesson 16** **Understand Unit Fractions as Quantities**—pp. 142–149	3.NF.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*.
	Lesson 17 **Understand Fractions as Quantities**—pp. 150–157		
	Lesson 18 **Understand Fractions on the Number Line**—pp. 158–165	3.NF.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.
		3.NF.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.
	Lesson 22 **Compare Fractions: Same Denominator**—pp. 190–197	3.NF.3d	Compare two fractions with the same numerator or the same denominator by reasoning about their size. 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.
	Lesson 23 **Compare Fractions: Same Numerator**—pp. 198–205		
***12-4A** **Compare Unlike Fractions Using Fraction Strips**—Online	**Lesson 22** **Compare Fractions: Same Denominator**—pp. 190–197	3.NF.3d	Compare two fractions with the same numerator or the same denominator by reasoning about their size. 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.
***12-4B** **Fraction Sense**—Online	**Lesson 23** **Compare Fractions: Same Numerator**—pp. 198–205		
12-5 **Order Fractions**—pp. 394–395	**Lesson 16** **Understand Unit Fractions as Quantities**—pp. 142–149	3.NF.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*.
	Lesson 17 **Understand Fractions as Quantities**—pp. 150–157		

Chapter 12 Fractions

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
	Lesson 22 **Compare Fractions: Same Denominator**—pp. 190–197	3.NF.3d Compare two fractions with the same numerator or the same denominator by reasoning about their size. 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.
	Lesson 23 **Compare Fractions: Same Numerator**—pp. 198–205	
12-6 **Find Part of a Set**—pp. 396–397		
12-7 **Mixed Numbers**—pp. 398–399		
12-8 **Add Fractions**—pp. 400–401		
12-9 **Subtract Fractions**—pp. 402–403		
12-10 **Unit Cost**—pp. 404–405		
12-11 **Problem Solving Strategy: Use a Drawing/Model**—pp. 406–407	**Lesson 18** **Understand Fractions on the Number Line**—pp. 158–165	3.NF.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.
	Lesson 20 **Write Equivalent Fractions**—pp. 174–181	3.NF.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.
12-12 **Problem Solving Applications: Mixed Review**—pp. 408–409		

Chapter 13 Decimals

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
13-1 **Fractions and Decimals**—pp. 416–417		
13-2 **Hundredths**—pp. 418–419		
13-3 **Decimals Greater Than One**—pp. 420–421		
13-4 **Compare and Order Decimals**—pp. 422–423		
13-5 **Add and Subtract Decimals**—pp. 424–425		
13-6 **Multiply Money**—pp. 426–427		
13-7 **Divide Money**—pp. 428–429		
13-8 **Problem Solving Strategy: Find a Pattern**—pp. 430–431	**Lesson 12** **Identify and Explain Arithmetic Patterns**—pp. 104–111	3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.*
13-9 **Problem Solving Applications: Mixed Review**—pp. 432–433		

Chapter 14 Get Ready for Algebra

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
14-1 **Divisibility**—pp. 440–441	**Lesson 12** **Identify and Explain Arithmetic Patterns**—pp. 104–111	3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.*
14-2 **Expressions and Variables**—pp. 442–443		

Chapter 14 Get Ready for Algebra

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
***14-2A** **Writing Variable Equations**—Online		
14-3 **Order of Operations**—pp. 444–445	**Lesson 10** **Problem Solving: Two-Step Problems**—pp. 88–95 **Lesson 11** **Problem Solving: Use Equations**—pp. 96–103	3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.[3] [3]This standard is limited to problems posed with whole numbers and having whole-number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order (Order of Operations).
14-4 **Missing Operation**—pp. 446–447		
14-5 **Factors**—pp. 448–449		
14-6 **Number Sentences**—pp. 450–451		
14-7 **Problem Solving Strategy: Use More Than One Step**—pp. 452–453	**Lesson 10** **Problem Solving: Two-Step Problems**—pp. 88–95 **Lesson 11** **Problem Solving: Use Equations**—pp. 96–103	3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.[3] [3]This standard is limited to problems posed with whole numbers and having whole-number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order (Order of Operations).
	Lesson 33 **Problem Solving: Perimeter**—pp. 296–303 **Lesson 34** **Problem Solving: Compare Perimeter and Area**—pp. 304–311	3.MD.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.

Chapter 14 Get Ready for Algebra

Progress in Mathematics, Grade 3	Common Core Progress Mathematics, Grade 3	Common Core State Standards for Mathematics, Grade 3
14-8 **Problem Solving Applications: Mixed Review**—pp. 454–455	**Lesson 10** **Problem Solving: Two-Step Problems**—pp. 88–95 **Lesson 11** **Problem Solving: Use Equations**—pp. 96–103	3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.[3] [3]This standard is limited to problems posed with whole numbers and having whole-number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order (Order of Operations).