SADLIER
Progress in Mathematics

SADLIER
Common Core Progress Mathematics

Common Core State Standards
for Mathematics

Grade 4 Crosswalk

Sadlier
William H. Sadlier, Inc.
www.sadlierschool.com
800-221-5175

Skills Update—Review of Grade 3 Skills

Progress in Mathematics, Grade 4		Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
SU	**Hundreds**—p. 1		
SU	**Compare Whole Numbers**—p. 2		
SU	**Recognize and Count Money**—p. 3		
SU	**Addition and Subtraction Facts**—p. 4		
SU	**Related Facts**—p. 5		
SU	**Add and Subtract without Regrouping**—p. 6		
SU	**Meaning of Multiplication**—p. 7		
SU	**Multiplication Facts**—p. 8		
SU	**Multiply with 10, 11, and 12**—p. 9		
SU	**Understand Division**—p. 10		
SU	**Division Facts**—p. 11		
SU	**Relate Multiplication and Division**—p. 12		
SU	**Identify Fractions**—p. 13		
SU	**Customary Units of Length**—p. 14		
SU	**Cup**—p. 15		
SU	**Pound**—p. 16		
SU	**Centimeter and Meter**—p. 17		
SU	**Liter**—p. 18		
SU	**Kilogram**—p. 19		
SU	**Perimeter**—p. 20	**Lesson 29** **Problem Solving: Apply Area and Perimeter Formulas**—pp. 258–265	4.MD. 3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems. *For 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.*

Skills Update—Review of Grade 3 Skills

Progress in Mathematics, Grade 4		Common Core Progress Mathematics, Grade 4		Common Core State Standards for Mathematics, Grade 4	
SU	**Congruent Figures**—p. 21				
SU	**Lines of Symmetry**—p. 22				
SU	**Ordered Pairs on a Grid**—p. 23				
SU	**Area**—p. 24	**Lesson 29**	**Problem Solving: Apply Area and Perimeter Formulas**—pp. 258–265	4.MD. 3	Apply the area and perimeter formulas for rectangles in real world and mathematical problems. *For 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.*
SU	**Record and Organize Data**—p. 25				
SU	**Graphing Sense**—p. 26				
SU	**Probability Experiments**—p. 27				

Chapter 1 Place Value

Progress in Mathematics, Grade 4		Common Core Progress Mathematics, Grade 4		Common Core State Standards for Mathematics, Grade 4	
1-1	**Thousands**—pp. 36–37	**Lesson 6**	**Understand Place Value of Whole Numbers**—pp. 56–63	4.NBT.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.*
		Lesson 7	**Read, Write, and Compare Whole Numbers**—pp. 64–71	4.NBT.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.

Chapter 1 Place Value

Progress in Mathematics, Grade 4		Common Core Progress Mathematics, Grade 4		Common Core State Standards for Mathematics, Grade 4	
1-2	**What is One Million?**—pp. 38–39				
1-3	**Millions**—pp. 40–41				
1-4	**Place Value**—pp. 42–43	**Lesson 6**	**Understand Place Value of Whole Numbers**—pp. 56–63	4.NBT.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.*
		Lesson 7	**Read, Write, and Compare Whole Numbers**—pp. 64–71	4.NBT. 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.
1-5	**Estimation**—pp. 44–45	**Lesson 8**	**Apply Place Value to Round Whole Numbers**—pp. 72–79	4.NBT. 3	Use place value understanding to round multi-digit whole numbers to any place.
1-6	**Compare and Order Whole Numbers**—pp. 46–47	**Lesson 7**	**Read, Write, and Compare Whole Numbers**—pp. 64–71	4.NBT. 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.
1-7	**Number Sense: Use a Number Line**—pp. 48–49				
1-8	**Make Change**—pp. 50–51				
1-9	**Compare and Order Money**—pp. 52–53				
1-10	**Rounding**—pp. 54–55	**Lesson 8**	**Apply Place Value to Round Whole Numbers**—pp. 72–79	4.NBT. 3	Use place value understanding to round multi-digit whole numbers to any place.
1-11	**Work with Money**—pp. 56–57				
1-12	**Problem Solving Strategy: Make a Table or List**—pp. 58–59				

Chapter 1 Place Value

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
1-13 **Problem Solving Applications: Mixed Review**—pp. 60–61	**Lesson 7** **Read, Write, and Compare Whole Numbers**—pp. 64–71	4.NBT. 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.

Chapter 2 Addition and Subtraction Concepts

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
2-1 **Addition Properties**—pp. 68–69		
2-2 **Addition Strategies**—pp. 70–71		
2-3 **Subtraction Concepts**—pp. 72–73		
2-4 **Expressions and Variables**—pp. 74–75		
2-5 **Addition and Subtraction Sentences**—pp. 76–77		
2-6 **Mental Math**—pp. 78–79	**Lesson 8** **Apply Place Value to Round Whole Numbers**—pp. 72–79	4.NBT. 3 Use place value understanding to round multi-digit whole numbers to any place.
2-7 **Estimate Sums and Differences**—pp. 80–81		
2-8 **Add and Subtract Money**—pp. 82–83	**Lesson 8** **Apply Place Value to Round Whole Numbers**—pp. 72–79	4.NBT. 3 Use place value understanding to round multi-digit whole numbers to any place.
	Lesson 28 **Problem Solving: Measurement**—pp. 250–257	4.MD.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.
2-9 **Check Addition and Subtraction**—pp. 84–85	**Lesson 9** **Add and Subtract Fluently with Whole Numbers**—pp. 80–87	4.NBT.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.

Chapter 2 Addition and Subtraction Concepts

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
2-10 **Problem Solving Strategy: Logical Reasoning**—pp. 86–87		
2-11 **Problem Solving Applications: Mixed Review**—pp. 88–89	**Lesson 9** **Add and Subtract Fluently with Whole Numbers**—pp. 80–87	4.NBT.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.

Chapter 3 Addition and Subtraction

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
3-1 **Front-End Estimation**—pp. 96–97		
3-2 **Add with Regrouping**—pp. 98–99	**Lesson 9** **Add and Subtract Fluently with Whole Numbers**—pp. 80–87	4.NBT.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.
3-3 **Four-Digit Addition**—pp. 100–101		
3-4 **Add Larger Numbers**—pp. 102–103		
3-5 **Three or More Addends**—pp. 104–105		
3-6 **Subtract with Regrouping**—pp. 106–107		
3-7 **Subtraction: Regroup Twice**—pp. 108–109		
3-8 **Subtract Larger Numbers**—pp. 110–111		
3-9 **Zeros in Subtraction**—pp. 112–113		
3-10 **Addition and Subtraction Practice**—pp. 114–115		
3-11 **Problem Solving Strategy: Choose the Operation**—pp. 116–117		
3-12 **Problem Solving Applications: Mixed Review**—pp. 118–119	**Lesson 9** **Add and Subtract Fluently with Whole Numbers**—pp. 80–87	4.NBT.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.

Chapter 4 Multiplication by One and Two Digits

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
4-1 **Multiplication Properties**—pp. 126–127	**Lesson 10** **Multiply Whole Numbers: Use Place Value**—pp. 88–95	4.NBT.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.
***4-1A** **Number Patterns**—Online	**Lesson 5** **Generate and Analyze Number and Shape Patterns**—pp. 42–49	4.OA.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.*
***4-1B** **Use Multiplication to Compare Numbers**—Online	**Lesson 1** **Interpret Multiplication Equations as Comparisons**—pp. 10–17	4.OA.1 Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.
	Lesson 2 **Problem Solving: Use Multiplication and Division to Make Comparisons**—pp. 18–25	4.OA. 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.
4-2 **Multiplication Models**—pp. 128–129	**Lesson 10** **Multiply Whole Numbers: Use Place Value**—pp. 88–95	4.NBT. 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.
4-3 **Special Factors**—pp. 130–131		

Chapter 4 Multiplication by One and Two Digits

Progress in Mathematics, Grade 4		Common Core Progress Mathematics, Grade 4		Common Core State Standards for Mathematics, Grade 4	
4-4	**Multiply by One-Digit Numbers**—pp. 132–133	**Lesson 3**	**Problem Solving: Multistep Problems**—pp. 26–33	4.OA.3	Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. 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.
		Lesson 10	**Multiply Whole Numbers: Use Place Value**—pp. 88–95	4.NBT. 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.
4-5	**Products: Front-End Estimation**—pp. 134–135				
***4-5A**	**Multiply with Models**—Online	**Lesson 10**	**Multiply Whole Numbers: Use Place Value**—pp. 88–95	4.NBT. 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.
4-6	**Multiply with Regrouping**—pp. 136–137				
***4-6A**	**Use Mental Math to Multiply**—Online				
4-7	**Multiply Three-Digit Numbers**—pp. 138–139	**Lesson 3**	**Problem Solving: Multistep Problems**—pp. 26–33	4.OA.3	Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. 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.

Chapter 4 Multiplication by One and Two Digits

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
	Lesson 10 **Multiply Whole Numbers: Use Place Value**—pp. 88–95	4.NBT. 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.
4-8 **Multiply Money**—pp. 140–141	**Lesson 28** **Problem Solving: Measurement**—pp. 250–257	4.MD.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.
4-9 **Multiply Four-Digit Numbers**—pp. 142–143 **4-10** **Patterns in Multiplication**—pp. 144–145	**Lesson 10** **Multiply Whole Numbers: Use Place Value**—pp. 88–95	4.NBT. 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.
4-11 **Products: Rounding to Estimate**—pp. 146–147	**Lesson 3** **Problem Solving: Multistep Problems**—pp. 26–33	4.OA.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. 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.

Chapter 4 Multiplication by One and Two Digits

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
***4-11A** **Multiply with Area Models**—Online	**Lesson 10** **Multiply Whole Numbers: Use Place Value**—pp. 88–95	4.NBT. 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.
***4-11B** **Break Apart Numbers to Multiply**—Online		
4-12 **Multiply by Two-Digit Numbers**—pp. 148–149	**Lesson 28** **Problem Solving: Measurement**—pp. 250–257	4.MD.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.
4-13 **More Multiplying by Two-Digit Numbers**—pp. 150–151	**Lesson 10** **Multiply Whole Numbers: Use Place Value**—pp. 88–95	4.NBT. 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.
4-14 **Multiply with Three-Digit Numbers**—pp. 152–153		
4-15 **Problem Solving Strategy: Work Backward**—pp. 154–155		
4-16 **Problem Solving Applications: Mixed Review**—pp. 156–157		

Chapter 5 Divide by One Digit

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
5-1 **Division Rules**—pp. 164–165		
5-2 **Relate Multiplication and Division**—pp. 166–167	**Lesson 11** **Multiply Whole Numbers: Use Properties of Operations**—pp. 96–103 **Lesson 12** **Divide Whole Numbers: Use Place Value**—pp. 104–111 **Lesson 13** **Divide Whole Numbers: Use Properties of Operations**—pp. 112–119	4.NBT. 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.
5-3 **Missing Numbers**—pp. 168–169		
5-4 **Number Patterns**—pp. 170–171	**Lesson 5** **Generate and Analyze Number and Shape Patterns**—pp. 42–49	4.OA. 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.
***5-4A** **Use Bar Diagrams**—Online	**Lesson 2** **Problem Solving: Use Multiplication and Division to Make Comparisons**—pp. 18–25	4.OA. 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.
5-5 **Estimate in Division**—pp. 172–173	**Lesson 3** **Problem Solving: Multistep Problems**—pp. 26–33	4.OA. 3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. 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.

Chapter 5 Divide by One Digit

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
***5-5A** **Use Models to Divide**—Online	**Lesson 12** **Divide Whole Numbers: Use Place Value**—pp. 104–111 **Lesson 13** **Divide Whole Numbers: Use Properties of Operations**—pp. 112–119	4.NBT. 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.
5-6 **One-Digit Quotients**—pp. 174–175	**Lesson 3** **Problem Solving: Multistep Problems**—pp. 26–33	4.OA. 3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. 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.
	Lesson 12 **Divide Whole Numbers: Use Place Value**—pp. 104–111 **Lesson 13** **Divide Whole Numbers: Use Properties of Operations**—pp. 112–119	4.NBT. 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.
5-7 **Divisibility**—pp. 176–177		
5-8 **Two-Digit Quotients**—pp. 178–179 **5-9** **More Two-Digit Quotients**—pp. 180–181	**Lesson 3** **Problem Solving: Multistep Problems**—pp. 26–33	4.OA. 3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. 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.

Chapter 5 Divide by One Digit

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
	Lesson 12 **Divide Whole Numbers: Use Place Value**—pp. 104–111 **Lesson 13** **Divide Whole Numbers: Use Properties of Operations**—pp. 112–119	4.NBT. 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.
5-10 **Three-Digit Quotients**—pp. 182–183 **5-11** **More Quotients**—pp. 184–185 **5-12** **Zeros in the Quotient**—pp. 186–187 **5-13** **Larger Numbers in Division**—pp. 188–189	**Lesson 3** **Problem Solving: Multistep Problems**—pp. 26–33	4.OA. 3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. 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.
	Lesson 12 **Divide Whole Numbers: Use Place Value**—pp. 104–111 **Lesson 13** **Divide Whole Numbers: Use Properties of Operations**—pp. 112–119	4.NBT. 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.
***5-13A** **Multistep Problems & Bar Diagrams**—Online	**Lesson 3** **Problem Solving: Multistep Problems**—pp. 26–33	4.OA. 3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. 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.

Chapter 5 Divide by One Digit

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
	Lesson 10 **Multiply Whole Numbers: Use Place Value**—pp. 88–95	4.NBT. 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.
	Lesson 12 **Divide Whole Numbers: Use Place Value**—pp. 104–111 **Lesson 13** **Divide Whole Numbers: Use Properties of Operations**—pp. 112–119	4.NBT. 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.
5-14 **Divide Money**—pp. 190–191	**Lesson 28** **Problem Solving: Measurement**—pp. 250–257	4.MD.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.
5-15 **Order of Operations**—pp. 192–193		
5-16 **Find the Mean**—pp. 194–195		
5-17 **Problem Solving Strategy: Interpret the Remainder**—pp. 196–197	**Lesson 2** **Problem Solving: Use Multiplication and Division to Make Comparisons**—pp. 18–25	4.OA.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.
	Lesson 3 **Problem Solving: Multistep Problems**—pp. 26–33	4.OA.3 Solve multistep word problems posed with whole numbers and having whole-number

– continued on next page –

Chapter 5 Divide by One Digit

Progress in Mathematics, Grade 4		Common Core Progress Mathematics, Grade 4		Common Core State Standards for Mathematics, Grade 4	
					– continued from previous page –
					r answers using the four operations, including problems in which remainders must be interpreted. 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.
5-18	**Problem Solving Applications: Mixed Review**—pp. 198–199	**Lesson 2**	**Problem Solving: Use Multiplication and Division to Make Comparisons**—pp. 18–25	4.OA.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.

Chapter 6 Measurement

Progress in Mathematics, Grade 4		Common Core Progress Mathematics, Grade 4		Common Core State Standards for Mathematics, Grade 4	
6-1	**Measure with Inches**—pp. 206–207				
6-2	**Rename Units of Length**—pp. 208–209	**Lesson 26**	**Convert Customary Measurement Units**—pp. 234–241	4.MD.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), …
6-3	**Compute Customary Units**—pp. 210–211				
6-4	**Customary Units of Capacity**—pp. 212–213				
6-5	**Customary Units of Weight**—pp. 214–215	**Lesson 28**	**Problem Solving: Measurement**—pp. 250–257	4.MD.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
					– continued on next page –

Chapter 6 Measurement

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
		– continued from previous page – 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.
6-6 **Measure with Metric Units**—pp. 216–217 **6-7** **Work with Metric Units**—pp. 218–219 **6-8** **Metric Units of Capacity**—pp. 220–221 **6-9** **Metric Units of Mass**—pp. 222–223	**Lesson 27** **Convert Metric Measurement Units**—pp. 242–249	4.MD.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), …*
	Lesson 28 **Problem Solving: Measurement**—pp. 250–257	4.MD.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.
***6-9A** **Represent Measures on a Number Line**—Online	**Lesson 28** **Problem Solving: Measurement**—pp. 250–257	4.MD.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.

Chapter 6 Measurement

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
6-10 **Temperature**—pp. 224–225		
***6-11A** **Rename Measures**—Online		
6-12 **Elapsed Time**—pp. 228–229	**Lesson 26** **Convert Customary Measurement Units**—pp. 234–241	4.MD.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), …
	Lesson 28 **Problem Solving: Measurement**—pp. 250–257	4.MD.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.
6-13 **Problem Solving Strategy: Use More Than One Step**—pp. 230–231	**Lesson 3** **Problem Solving: Multistep Problems**—pp. 26–33	4.OA.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. 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.
	Lesson 28 **Problem Solving: Measurement**—pp. 250–257	4.MD.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money,

– continued on next page –

Chapter 6 Measurement

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
		– continued from previous page – 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.
6-14 **Problem Solving Applications: Mixed Review**—pp. 232–233	**Lesson 28** **Problem Solving: Measurement**—pp. 250–257	4.MD.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.

Chapter 7 Statistics and Probability

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
7-1 **Pictographs**—pp. 240–241		
7-2 **Bar Graphs**—pp. 242–243		
7-3 **Line Graphs**—pp. 244–245		
7-4 **Surveys and Line Plots**—pp. 246–247	**Lesson 30** **Problem Solving: Use Line Plots**—pp. 266–273	4.MD.4 Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots. *For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.*

Chapter 7 Statistics and Probability

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
7-5 **Circle Graphs**—pp. 248–249		
7-6 **Combinations**—pp. 250–251		
7-7 **Predict Probability**—pp. 252–253		
7-8 **Events and Outcomes**—pp. 254–255		
7-9 **Problem Solving Strategy: Use a Diagram/Graph**—pp. 256–257		
7-10 **Problem Solving Applications: Mixed Review**—pp. 258–259		

Chapter 8 Fraction Concepts

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
8-1 **Write Fractions**—pp. 266–267		
8-2 **Fractions on a Number Line**—pp. 268–269	**Lesson 16** **Compare Two Fractions**—pp. 142–149	4.NF. 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 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.
8-3 **Estimate Fractions**—pp. 270–271		
***8-3A** **Model Equivalent Fractions**—Online	**Lesson 14** **Understand Equivalent Fractions**—pp. 126–133	4.NF. 1 Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ 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.
	Lesson 15 **Write Equivalent Fractions**—pp. 134–141	

Chapter 8 Fraction Concepts

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
8-4 **Equivalent Fractions**—pp. 272–273	**Lesson 14** **Understand Equivalent Fractions**—pp. 126–133 **Lesson 15** **Write Equivalent Fractions**—pp. 134–141	4.NF. 1 Explain why a fraction *a/b* is equivalent to a fraction $(n \times a)/(n \times b)$ 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.
	Lesson 16 **Compare Two Fractions**—pp. 142–149	4.NF.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 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.
8-5 **Write Equivalent Fractions**—pp. 274–275	**Lesson 14** **Understand Equivalent Fractions**—pp. 126–133 **Lesson 15** **Write Equivalent Fractions**—pp. 134–141	4.NF. 1 Explain why a fraction *a/b* is equivalent to a fraction $(n \times a)/(n \times b)$ 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.
8-6 **Factor**s—pp. 276–277	**Lesson 4** **Find Factors and Multiples for Whole Numbers**—pp. 34–41	4.OA.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 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.
8-7 **Fractions: Lowest Terms**—pp. 278–279	**Lesson 14** **Understand Equivalent Fractions**—pp. 126–133 **Lesson 15** **Write Equivalent Fractions**—pp. 134–141	4.NF. 1 Explain why a fraction *a/b* is equivalent to a fraction $(n \times a)/(n \times b)$ 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.

Chapter 8 Fraction Concepts

Progress in Mathematics, Grade 4		Common Core Progress Mathematics, Grade 4		Common Core State Standards for Mathematics, Grade 4	
8-8	**Mixed Numbers**—pp. 280–281				
***8-8A**	**Compare Fractions Using Benchmarks**—Online	**Lesson 16**	**Compare Two Fractions**—pp. 142–149	4.NF.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 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.
8-9	**Compare Fractions**—pp. 282–283				
8-10	**Order Fractions**—pp. 284–285				
8-11	**Problem Solving Strategy: Logical Reasoning**—pp. 286–287				
8-12	**Problem Solving Applications: Mixed Review**—pp. 288–289	**Lesson 14**	**Understand Equivalent Fractions**—pp. 126–133	4.NF. 1	Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ 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.
		Lesson 15	**Write Equivalent Fractions**—pp. 134–141		
		Lesson 16	**Compare Two Fractions**—pp. 142–149	4.NF.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 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.

Chapter 9 Fractions: Addition and Subtraction

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
9-1 **Add Fractions: Like Denominators**—pp. 296–297	**Lesson 20** **Problem Solving: Add and Subtract Fractions**—pp. 174–181	4.NF. 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.
***9-1A** **Use Models to Add Fractions**—Online	**Lesson 17** **Add and Subtract Fractions with Like Denominators**—pp. 150–157	4.NF. 3a Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.
***9-1B** **Decompose Fractions**—Online	**Lesson 18** **Decompose a Fraction as a Sum of Fractions**—pp. 158–165	4.NF. 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.*
***9-1C** **Use Models to Subtract Fractions**—Online	**Lesson 17** **Add and Subtract Fractions with Like Denominators**—pp. 150–157	4.NF. 3a Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.
9-2 **Subtract Fractions: Like Denominators**—pp. 298–299 ***9-2A** **Word Problems Involving Fractions**—Online	**Lesson 20** **Problem Solving: Add and Subtract Fractions**—pp. 174–181	4.NF. 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.
9-3 **Improper Fractions**—pp. 300–301		
9-4 **Estimate with Mixed Numbers**—pp. 302–303		
***9-4A** **Add Mixed Numbers**—Online ***9-4B** **Subtract Mixed Numbers**—Online	**Lesson 19** **Add and Subtract Mixed Numbers with Like Denominators**—pp. 166–173	4.NF.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.
9-5 **Add and Subtract Mixed Numbers**—pp. 304–305		

Chapter 9 Fractions: Addition and Subtraction

Progress in Mathematics, Grade 4		Common Core Progress Mathematics, Grade 4		Common Core State Standards for Mathematics, Grade 4	
***9-5A**	**Organize Measurement Data**—Online	**Lesson 30**	**Problem Solving: Use Line Plots**—pp. 266–273	4.MD.4	Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots. *For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.*
9-6	**Multiples**—pp. 306–307				
***9-6A**	**Factor Pairs**—Online	**Lesson 4**	**Find Factors and Multiples for Whole Numbers**—pp. 34–41	4.OA.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 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.
***9-6B**	**Prime and Composite Numbers**—Online				
***9-6C**	**Add Fractions with Denominators of 10 and 100**—Online	**Lesson 24**	**Add Fractions: Denominators of 10 and 100**—pp. 206–213	4.NF.5	Express a fraction with denominator 10 as an equivalent fraction 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. 4Students who can generate equivalent fractions can develop strategies for adding fractions with unlike denominators in general. But addition and subtraction with unlike denominators in general is not a requirement at this grade.
9-7	**Add Fractions: Unlike Denominators**—pp. 308–309				
9-8	**Subtract Fractions: Unlike Denominators**—pp. 310–311				
***9-8A**	**Multiply with Fractions**—Online	**Lesson 21**	**Multiply Unit Fractions by Whole Numbers**—pp. 182–189	4.NF.4a	Understand a fraction *a/b* as a multiple of 1/*b*. *For example, use a visual fraction model to represent 5/4 as the product 5 × (1/4), recording the conclusion by the equation 5/4 = 5 × (1/4).*

Chapter 9 Fractions: Addition and Subtraction

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
	Lesson 22 **Multiply Fractions by Whole Numbers**—pp. 190–197	4.NF.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.)*
	Lesson 23 **Problem Solving: Multiply Fractions by Whole Numbers**—pp. 198–205	4.NF.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?*
9-9 **Compute Probability**—pp. 312–313		
9-10 **Find Part of a Number**—pp. 314–315	**Lesson 23** **Problem Solving: Multiply Fractions by Whole Numbers**—pp. 198–205	4.NF.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?
9-11 **Problem Solving Strategy: Use Simpler Numbers**—pp. 316–317		
9-12 **Problem Solving Applications: Mixed Review**—pp. 318–319	**Lesson 20** **Problem Solving: Add and Subtract Fractions**—pp. 174–181	4.NF.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.

Chapter 10 Geometry

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4	
10-1 **Points, Lines, and Line Segments**—pp. 326–327	**Lesson 34** **Draw and Identify Points, Lines, and Angles**—pp. 304–311	4.G.1	Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
***10-1A** **Angle Measure**—Online	**Lesson 31** **Understand Angle Measures**—pp. 274–281	4.MD.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.
		4.MD.5b	An angle that turns through *n* one-degree angles is said to have an angle measure of *n* degrees.
10-2 **Rays and Angles**—pp. 328–329	**Lesson 31** **Understand Angle Measures**—pp. 274–281	4.MD.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.
	Lesson 32 **Use a Protractor to Measure Angles**—pp. 282–289	4.MD.6	Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.
	Lesson 34 **Draw and Identify Points, Lines, and Angles**—pp. 304–311	4.G.1	Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
	Lesson 35 **Classify Two-Dimensional Figures**—pp. 312–319	4.G.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.

Chapter 10 Geometry

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
***10-2A Measure Angles**—Online	**Lesson 32 Use a Protractor to Measure Angles**—pp. 282–289	4.MD.6 Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.
***10-2B Unknown Angle Measures**—Online	**Lesson 33 Problem Solving: Find Unknown Angle Measures**—pp. 290–297	4.MD.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.
10-3 Parallel and Perpendicular Lines—pp. 330–331	**Lesson 34 Draw and Identify Points, Lines, and Angles**—pp. 304–311	4.G.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
	Lesson 35 Classify Two-Dimensional Figures—pp. 312–319	4.G.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.
10-4 Circles—pp. 332–333	**Lesson 34 Draw and Identify Points, Lines, and Angles**—pp. 304–311	4.G.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
10-5 Polygons—pp. 334–335		
10-6 Quadrilaterals—pp. 336–337	**Lesson 35 Classify Two-Dimensional Figures**—pp. 312–319	4.G.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.
10-7 Triangles—pp. 338–339		

Chapter 10 Geometry

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
***10-7A** **Symmetry**—Online	**Lesson 36** **Identify Lines of Symmetry**—pp. 320–327	4.G.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.
10-8 **Similar Figures**—pp. 340–341		
10-9 **Transformations: Slides and Flips**—pp. 342–343		
10-10 **Turns**—pp. 344–345		
10-11 **Coordinate Geometry**—pp. 346–347	**Lesson 34** **Draw and Identify Points, Lines, and Angles**—pp. 304–311	4.G.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
10-12 **Problem Solving Strategy: Find a Pattern**—pp. 348–349	**Lesson 5** **Generate and Analyze Number and Shape Patterns**—pp. 42–49	4.OA.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.*
	Lesson 36 **Identify Lines of Symmetry**—pp. 320–327	4.G.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.
10-13 **Problem Solving Applications: Mixed Review**—pp. 350–351	**Lesson 34** **Draw and Identify Points, Lines, and Angles**—pp. 304–311	4.G.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

Chapter 11 Perimeter, Area, and Volume

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
11-1 **Use Perimeter Formulas**—pp. 358–359	**Lesson 29** **Problem Solving: Apply Area and Perimeter Formulas**—pp. 258–265	4.MD.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems. *For 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.*
11-2 **Use Area Formulas**—pp. 360–361		
11-3 **Perimeter and Area**—pp. 362–363		
***11-3A** **Perimeter and Area Formulas**—Online		
11-4 **Solid Figures**—pp. 364–365		
11-5 **Solid Figures and Polygons**—pp. 366–367		
11-6 **Spatial Relationships**—pp. 368–369		
11-7 **Volume**—pp. 370–371		
11-8 **Problem Solving Strategy: Using a Drawing or Model**—pp. 372–373		
11-9 **Problem Solving Applications: Mixed Review**—pp. 374–375	**Lesson 29** **Problem Solving: Apply Area and Perimeter Formulas**—pp. 258–265	4.MD.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems. *For 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.*

Chapter 12 Divide by Two Digits

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
12-1 **Division Patterns**—pp. 382–383		

Chapter 12 Divide by Two Digits

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
12-2 **Divisors: Multiples of Ten**—pp. 384–385	**Lesson 3** **Problem Solving: Multistep Problems**—pp. 26–33	4.OA.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. 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.
12-3 **Estimate Quotients**—pp. 386–387		
12-4 **Two-Digit Dividends**—pp. 388–389		
12-5 **Three-Digit Dividends**—pp. 390–391		
12-6 **Trial Quotients**—pp. 392–393		
12-7 **Greater Quotients**—pp. 394–395		
12-8 **Four-Digit Dividends**—pp. 396–397		
12-9 **Zero in the Quotient**—pp. 398–399		
12-10 **Greater Dividends**—pp. 400–401	**Lesson 3** **Problem Solving: Multistep Problems**—pp. 26–33	4.OA.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. 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.
12-11 **Problem Solving Strategy: Use More Than One Step**—pp. 402–403	**Lesson 2** **Problem Solving: Use Multiplication and Division to Make Comparisons**—pp. 18–25	4.OA.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.
	Lesson 3 **Problem Solving: Multistep Problems**—pp. 26–33	4.OA.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. 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.
12-12 **Problem Solving Applications: Mixed**	**Lesson 2** **Problem Solving: Use Multiplication and**	4.OA.2 Multiply or divide to solve word problems

Chapter 12 Divide by Two Digits

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
Review—pp. 404–405	**Division to Make Comparisons**—pp. 18–25	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.

Chapter 13 Decimals

Progress in Mathematics, Grade 4		Common Core Progress Mathematics, Grade 4		Common Core State Standards for Mathematics, Grade 4	
13-1	**Tenths and Hundredths**—pp. 412–413	**Lesson 25**	**Write and Compare Decimal Fractions**—pp. 214–221	4.NF.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.
13-2	**Decimals Greater Than One**—pp. 414–415				
13-3	**Decimal Place Value**—pp. 416–417				
***13-3A**	**Compare Decimals with Models and Symbols**—Online	**Lesson 25**	**Write and Compare Decimal Fractions**—pp. 214–221	4.NF.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.
13-4	**Compare Decimals**—pp. 418–419				
13-5	**Order Decimals**—pp. 420–421				
13-6	**Round Decimals**—pp. 422–423				
13-7	**Estimate with Decimals**—pp. 424–425				
13-8	**Add Decimals**—pp. 426–427				
13-9	**Subtract Decimals**—pp. 428–429				
13-10	**Divide with Money**—pp. 430–431	**Lesson 28**	**Problem Solving: Measurement**—pp. 250–257	4.MD.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

– continued on next page –
– continued from previous page –

Chapter 13 Decimals

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
		as number line diagrams that feature a measurement scale.
13-11 **Problem Solving Strategy: Use More Than One Step**—pp. 432–433		
13-12 **Problem Solving Applications: Mixed Review**—pp. 434–435		

Chapter 14 Get Ready for Algebra

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
14-1 **Equations**—pp. 442–443	**Lesson 2** **Problem Solving: Use Multiplication and Division to Make Comparisons**—pp. 18–25	4.OA.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.
	Lesson 3 **Problem Solving: Multistep Problems**—pp. 26–33	4.OA.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. 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.
14-2 **Find Missing Numbers**—pp. 444–445		
14-3 **Functions**—pp. 446–447	**Lesson 5** **Generate and Analyze Number and Shape Patterns**—pp. 42–49	4.OA.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

– continued on next page –
– continued from previous page –

appear to alternate between odd and even

Chapter 14 Get Ready for Algebra

Progress in Mathematics, Grade 4	Common Core Progress Mathematics, Grade 4	Common Core State Standards for Mathematics, Grade 4
		numbers. Explain informally why the numbers will continue to alternate in this way.
14-4 **Graph Equations**—pp. 448–449		
14-5 **Missing Symbols**—pp. 450–451		
14-6 **Use Parentheses**—pp. 452–453		
14-7 **Problem Solving Strategy: More Than One Way**—pp. 454–455		
14-8 **Problem Solving Applications: Mixed Review**—pp. 456–457		