

Common Core Standards Alignment Chart • Grade 1

Units	1.OA.1	1.OA.2	1.OA.3	1.OA.4	1.OA.5	1.OA.6	1.OA.7	1.OA.8	1.NBT.1	1.NBT.2	1.NBT.3	1.NBT.4	1.NBT.5	1.NBT.6	1.MD.1	1.MD.2	1.MD.3	1.MD.4	1.G.1	1.G.2	1.G.3
Operations & Algebraic Thinking																					
Unit 1: Add To and Take From	✓			✓																	
Unit 2: Put Together and Take Apart	✓			✓																	
Unit 3: Add and Subtract to Compare	✓			✓																	
Unit 4: Add Three Numbers		✓																			
Unit 5: Use Properties of Addition to Add		✓	✓																		
Unit 6: Use Strategies to Add			✓		✓	✓															
Unit 7: Use Strategies to Subtract			✓	✓	✓	✓															
Unit 8: Find the Missing Number							✓	✓													
Numbers & Operations in Base Ten																					
Unit 9: Count, Read, and Write Numbers to 120								✓													
Unit 10: Tens and Ones									✓												
Unit 11: Compare Numbers									✓	✓											
Unit 12: Add Two-Digit and One-Digit Numbers											✓	✓	✓								
Unit 13: Ten More, Ten Less											✓	✓									
Unit 14: Add Multiples of Ten											✓										
Unit 15: Subtract Multiples of Ten													✓								
Measurement & Data																					
Unit 16: Compare and Order Lengths														✓	✓						
Unit 17: Measure Length with Non-Standard Units															✓						
Unit 18: Tell and Write Time																	✓				
Unit 19: Interpret Data																		✓			
Geometry																					
Unit 20: Use Plane Shapes																			✓		
Unit 21: Use Solid Shapes																				✓	
Unit 22: Parts of Shapes																					✓

Common Core Standards Alignment Chart

Units	2.OA.1	2.OA.2	2.OA.3	2.OA.4	2.NBT.1	2.NBT.2	2.NBT.3	2.NBT.4	2.NBT.5	2.NBT.6	2.NBT.7	2.NBT.8	2.NBT.9	2.MD.1	2.MD.2	2.MD.3	2.MD.4	2.MD.5	2.MD.6	2.MD.7	2.MD.8	2.MD.9	2.MD.10	2.G.1	2.G.2	2.G.3
Operations & Algebraic Thinking																										
Unit 1: Add and Subtract Fact Families		✓																								
Unit 2: Write a Number Sentence	✓																									
Unit 3: Odd and Even			✓																							
Unit 4: Add Equal Groups				✓																						
Number & Operations in Base 10																										
Unit 5: Understand Place Value					✓																					
Unit 6: Count, Read, Write to 1,000						✓	✓																			
Unit 7: Compare Numbers								✓																		
Unit 8: Use Strategies to Add									✓																	
Unit 9: Add Two-Digit Numbers										✓																
Unit 10: One Hundred More or Less												✓														
Unit 11: Add Three-Digit Numbers											✓															
Unit 12: Use Strategies to Subtract													✓													
Unit 13: Subtract Two-Digit Numbers									✓		✓															
Unit 14: Subtract Three-Digit Numbers										✓	✓															
Measurement & Data																										
Unit 15: Inch, Foot, Yard														✓	✓	✓	✓									
Unit 16: Centimeter, Meter														✓	✓	✓	✓									
Unit 17: Add and Subtract Lengths																		✓	✓							
Unit 18: Tell Time (Nearest Five Min.)																				✓						
Unit 19: How Much Money?																					✓					
Unit 20: Make a Line Plot																						✓				
Unit 21: Make a Graph																							✓			
Geometry																										
Unit 22: Identify Shapes																								✓		
Unit 23: Parts of Shapes																									✓	✓

Common Core Standards Alignment Chart • Grade 3

Units	3.NBT.1	3.NBT.2	3.NBT.3	3.OA.1	3.OA.2	3.OA.3	3.OA.4	3.OA.5	3.OA.6-7	3.OA.8	3.OA.9	3.NF.1	3.NF.2	3.NF.3	3.MD.1	3.MD.2	3.MD.3	3.MD.4	3.MD.5	3.MD.6	3.MD.7	3.MD.8	3.G.1	3.G.2
Number & Operations in Base Ten																								
Unit 1: Use Place Value to Round Whole Numbers	✓																							
Unit 2: Estimate Sums and Differences	✓	✓								✓														
Unit 3: Add Whole Numbers		✓																						
Unit 4: Subtract Whole Numbers		✓																						
Operations & Algebraic Thinking																								
Unit 5: Solve Two-Step Word Problems	✓									✓														
Unit 6: Meaning of Multiplication				✓																				
Unit 7: Properties of Multiplication								✓																
Unit 8: Patterns in Multiplication											✓													
Unit 9: Multiply by Multiples of Ten			✓																					
Unit 10: Meaning of Division				✓				✓	✓															
Unit 11: Fact Families for Multiplication & Division									✓															
Unit 12: Solve Multiplication and Division Problems						✓																		
Unit 13: Use Multiplication or Division to Find the Missing Number							✓		✓															
Number & Operations—Fractions																								
Unit 14: Understand Fractions												✓												
Unit 15: Fractions on a Number Line													✓											
Unit 16: Equivalent Fractions														✓										
Unit 17: Compare Fractions														✓										
Measurement & Data and Geometry																								
Unit 18: Time to the Minute															✓									
Unit 19: Grams, Kilograms, Liters																✓								
Unit 20: Measure Length to the Nearest Quarter Inch																		✓						
Unit 21: Make and Use Pictographs																	✓	✓						
Unit 22: Make and Use Bar Graphs																	✓							
Unit 23: Understand Perimeter																							✓	
Unit 24: Understand Area																			✓	✓	✓	✓		
Unit 25: Find Area																			✓	✓	✓	✓		
Unit 26: Quadrilaterals																								✓
Unit 27: Partition Shapes																								✓

Common Core Standards Alignment Chart • Grade 4

Units	4.OA.1	4.OA.2	4.OA.3	4.OA.4	4.OA.5	4.NBT.1	4.NBT.2	4.NBT.3	4.NBT.4	4.NBT.5	4.NBT.6	4.NF.1	4.NF.2	4.NF.3	4.NF.4	4.NF.5	4.NF.6	4.NF.7	4.MD.1	4.MD.2	4.MD.3	4.MD.4	4.MD.5	4.MD.6	4.MD.7	4.G.1	4.G.2	4.G.3
Operations & Algebraic Thinking																												
Unit 1: Write an Equation	✓	✓																										
Unit 2: Solve Multi-Step Problems	✓	✓	✓																									
Unit 3: Factors and Multiples				✓																								
Unit 4: Generate Patterns					✓																							
Number & Operations in Base Ten																												
Unit 5: Use Place Value						✓	✓	✓																				
Unit 6: Add Multi-Digit Numbers									✓																			
Unit 7: Subtract Multi-Digit Numbers									✓																			
Unit 8: Multiplication Properties	✓	✓	✓	✓						✓																		
Unit 9: Multiply by One-Digit Number	✓	✓	✓	✓						✓																		
Unit 10: Multiply by Two-Digit Number	✓	✓	✓	✓						✓																		
Unit 11: Divide Two-Digit Numbers	✓	✓	✓	✓								✓																
Unit 12: Divide Multi-Digit Numbers	✓	✓	✓	✓							✓																	
Number & Operations—Fractions																												
Unit 13: Find Equivalent Fractions												✓																
Unit 14: Compare and Order Fractions													✓															
Unit 15: Add and Subtract Fractions														✓														
Unit 16: Add and Subtract Mixed Numbers														✓														
Unit 17: Multiply Fraction/Whole Number															✓													
Unit 18: Tenths and Hundredths																✓	✓											
Unit 19: Compare Decimals																		✓										
Measurement & Data																												
Unit 20: Use Metric Measurements																			✓	✓								
Unit 21: Use Customary Measurements																			✓	✓								
Unit 22: Perimeter and Area																					✓							
Unit 23: Make Line Plots																						✓						
Geometry																												
Unit 24: Lines and Angles																										✓		
Unit 25: Measure Angles																						✓	✓	✓				
Unit 26: Classify Polygons																											✓	
Unit 27: Symmetry																												✓

Common Core Standards Alignment Chart • Grade 5

Units	5.OA.1	5.OA.2	5.OA.3	5.NBT.1	5.NBT.2	5.NBT.3	5.NBT.4	5.NBT.5	5.NBT.6	5.NBT.7	5.NF.1	5.NF.2	5.NF.3	5.NF.4	5.NF.5	5.NF.6	5.NF.7	5.MD.1	5.MD.2	5.MD.3	5.MD.4	5.MD.5	5.G.1	5.G.2	5.G.3	5.G.4	
Operations & Algebraic Thinking																											
Unit 1: Order of Operations	✓																										
Unit 2: Write and Interpret Expressions		✓																									
Unit 3: Patterns and Ordered Pairs			✓																								
Number & Operations in Base Ten																											
Unit 4: Decimal Place Value				✓		✓																					
Unit 5: Powers of 10					✓																						
Unit 6: Compare Decimals						✓																					
Unit 7: Round Decimals							✓																				
Unit 8: Multiply Whole Numbers								✓																			
Unit 9: Divide by a One-Digit Divisor									✓	✓																	
Unit 10: Divide by a Two-Digit Divisor									✓																		
Unit 11: Add and Subtract Decimals										✓																	
Unit 12: Multiply Decimals										✓																	
Unit 13: Divide Decimals										✓																	
Number & Operations—Fractions																											
Unit 14: Add Fractions											✓	✓															
Unit 15: Subtract Fractions											✓	✓															
Unit 16: Multiply Whole Numbers/Fractions													✓	✓	✓												
Unit 17: Multiply Fractions													✓	✓	✓												
Unit 18: Multiply Mixed Numbers													✓	✓	✓	✓	✓										
Unit 19: Divide Whole Numbers/Fractions																	✓										
Measurement & Data																											
Unit 20: Convert Among Metric Units																		✓	✓								
Unit 21: Convert Among Customary Units																		✓	✓								
Unit 22: Use Measurement Data																			✓								
Unit 23: Understand Volume																				✓	✓						
Unit 24: Find Volume																					✓	✓					
Geometry																											
Unit 25: Locate Points on Coordinate Plane																							✓	✓			
Unit 26: Graph Points on the Coordinate Plane																							✓	✓			
Unit 27: Classify Polygons																									✓	✓	

Common Core Standards Alignment Chart • Grade 6

Units	6.RP.1	6.RP.2	6.RP.3	6.NS.1	6.NS.2	6.NS.3	6.NS.4	6.NS.5	6.NS.6	6.NS.7	6.NS.8	6.EE.1	6.EE.2	6.EE.3	6.EE.4	6.EE.5	6.EE.6	6.EE.7	6.EE.8	6.EE.9	6.G.1	6.G.2	6.G.3	6.G.4	6.SP.1	6.SP.2	6.SP.3	6.SP.4	6.SP.5		
Ratios & Proportional Relationships																															
Unit 1: Ratios & Equivalent Ratios	✓		✓																												
Unit 2: Rates		✓	✓																												
Unit 3: Understand Percent	✓		✓																												
Unit 4: Ratios, Decimals, and Percents	✓		✓																												
Unit 5: Find Percent of a Number			✓																												
The Number System																															
Unit 6: Divide Whole Numbers				✓																											
Unit 7: Add and Subtract Decimals					✓																										
Unit 8: Multiply and Divide Decimals					✓																										
Unit 9: Greatest Common Factor & Least Common Multiple						✓																									
Unit 10: Multiply Fractions			✓																												
Unit 11: Divide Fractions			✓																												
Unit 12: Understand Integers							✓			✓																					
Unit 13: Order Rational Numbers								✓	✓																						
Unit 14: Graph Points on the Coordinate Plane							✓		✓																						
Expressions & Equations																															
Unit 15: Exponents											✓																				
Unit 16: Order of Operations											✓																				
Unit 17: Algebraic Expressions												✓																			
Unit 18: Properties of Operations													✓	✓																	
Unit 19: Write and Solve Equations															✓	✓	✓														
Unit 20: Write and Solve Inequalities															✓				✓												
Unit 21: Graph Equations																				✓											
Geometry																															
Unit 22: Area of Polygons																					✓										
Unit 23: Draw Polygons on the Coordinate Plane																							✓								
Unit 24: Find Surface Area																								✓							
Unit 25: Find Volume																						✓									
Statistics & Probability																															
Unit 26: Mean, Median, and Mode																									✓	✓	✓				
Unit 27: Make and Interpret Dot Plots																												✓	✓		
Unit 28: Make and Interpret Histograms																												✓	✓		
Unit 29: Make and Interpret Box Plots																												✓	✓		

How Does Common Core Mathematics Help My Students?

- **Mini-lesson for each unit** introduces Common Core math skills and concepts.

Unit 4
Ratios, Decimals, and Percents

Standard

Ratios and Proportional Relationships 6.RP
Understand ratio concepts and use ratio reasoning to solve problems.
6.RP.1. Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.
6.RP.3. Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.
 a) Find a percent of a quantity (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.

Model the Skill

◆ Draw the following table on the board.

Ratio	Decimal	Percent
$\frac{5}{10}$	0.5	50%
$\frac{1}{2}$		
$\frac{3}{4}$		

◆ **Say:** Today we are relating fractions, ratios, decimals, and percentages. Look at this table. What decimal shows the ratio 5 to 10? (0.5) What percent is equal to 0.5? (50%) Why? (Because 5/10 or 0.5 is equal to 50/100, or 0.50, and percent is part of 100.)

◆ Repeat with other examples in the table. Remind students that percent is a ratio that compares a number to 100. To write an equivalent decimal, simply divide the numerator by the denominator. Then convert the decimal to percent by multiplying by 100 (which, in short, means moving decimal point two places to the right).

◆ Assign students the appropriate practice pages to support their understanding of the skill.

Assess the Skill

Use the following problems to pre-/post-assess students' understanding of the skill.

$\frac{1}{50}$	$\frac{1}{100}$	$\frac{3}{5}$	$\frac{3}{25}$
_____ %	_____ %	_____ %	_____ %

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Common Core Standard(s) covered in the unit

Mini-lesson introduces or refreshes target skills and concepts

Quick and easy ongoing assessment opportunities

- **Four practice pages** with three levels of differentiated practice, and word problems follow each mini-lesson.

Unit 4 • Ratios, Decimals, and Percents Name _____

Write a ratio as a percent using equal ratios.

1 $\frac{2}{5} \times \frac{\square}{\square} = \frac{\square}{100}$
 $\frac{\square}{100} = \square\%$
 $\frac{2}{5} = \square\%$

2 $\frac{9}{25} \times \frac{\square}{\square} = \frac{\square}{100}$
 $\frac{\square}{100} = \square\%$
 $\frac{9}{25} = \square\%$

Remember: Multiply both terms of the ratio by the same number.
 $\frac{2}{5} \times \frac{20}{20} = \frac{40}{100}$

3 $\frac{3}{20} \times \frac{\square}{\square} = \frac{\square}{100}$
 $\frac{\square}{100} = \square\%$
 $\frac{3}{20} = \square\%$

4 $\frac{1}{5} \times \frac{\square}{\square} = \frac{\square}{100}$
 $\frac{\square}{100} = \square\%$
 $\frac{1}{5} = \square\%$

5 $\frac{7}{10} \times \frac{\square}{\square} = \frac{\square}{100}$
 $\frac{\square}{100} = \square\%$
 $\frac{7}{10} = \square\%$

Write a ratio as a percent using a decimal.

6 $\frac{2}{5} \rightarrow 5 \overline{) 2.00}$
 $\frac{2}{5} = 0.\underline{\quad}$
 $\frac{2}{5} = \square\%$

7 $\frac{1}{3} \rightarrow 3 \overline{) 1.000}$
 $\frac{1}{3} = 0.\underline{\quad}$
 $\frac{1}{3} = \square\%$

8 $\frac{1}{2} \rightarrow 2 \overline{) 1.00}$
 $\frac{1}{2} = 0.\underline{\quad}$
 $\frac{1}{2} = \square\%$

9 $\frac{3}{8} \rightarrow 8 \overline{) 3.00}$
 $\frac{3}{8} = 0.\underline{\quad}$
 $\frac{3}{8} = \square\%$

10 $\frac{5}{6} \rightarrow 6 \overline{) 5.00}$
 $\frac{5}{6} = 0.\underline{\quad}$
 $\frac{5}{6} = \square\%$

★ **Draw a circle around ratios that are repeating decimals.**

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Level 1: Students who need extra support can start at the first practice page, which offers the most on-page support. This page often includes illustrations or model drawing to support every question.

Level 1



Level 2: The second level of practice offers streamlined support features for the first few problems (illustrations, model drawing, or an algorithm reminder for support).

Name _____ Unit 4 • Ratios, Decimals, and Percents

Write each as a percent.

1 $\frac{1}{4}$ 2 $\frac{1}{10}$ 3 $\frac{4}{5}$ 4 $\frac{4}{25}$

5 $\frac{1}{3}$ 6 $\frac{5}{8}$ 7 $\frac{9}{12}$ 8 $\frac{3}{4}$

9 0.37 10 0.08 11 0.6 12 0.375

Note: Memorize common ratio and percent equivalents.

Remember: You can use equivalent ratios or write a decimal first.

Complete.

Ratio	Decimal	Percent
1 $\frac{1}{5}$	0.5	
2 $\frac{80}{100}$		33 $\frac{1}{3}$ %
3 $\frac{3}{8}$		
4 $\frac{1}{6}$		87.5%
5		60%

☆ Tell how to write a decimal as a percent.

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Level 2



Each practice page includes a bonus thinking-skills question so students can answer "How do you know?" to address Common Core Standards of Mathematical Practice and demonstrate their reasoning and understanding of the concept.



Level 3: The third practice page does not offer on-page support and depicts how students are expected to be able to perform at this grade level, whether in class or in testing.

Name _____ Unit 4 • Ratios, Decimals, and Percents

Write each as a percent.

1 $\frac{2}{10}$ 2 $\frac{4}{8}$ 3 $\frac{5}{20}$ 4 $\frac{1}{5}$

5 $\frac{12}{16}$ 6 $\frac{1}{40}$ 7 $\frac{2}{3}$ 8 $\frac{24}{50}$

9 0.21 10 0.06 11 0.9 12 0.425

13 1.0 14 0.49 15 0.803 16 0.999

Complete.

Ratio	Decimal	Percent
1 $\frac{3}{5}$	0.4	
2 $\frac{2}{6}$		33 $\frac{1}{3}$ %
3 $\frac{2}{6}$	0.666	
4 $\frac{6}{24}$		29%
5	0.525	

☆ How do you write the ratio $\frac{3}{5}$ as a percent? Explain the steps you take.

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Level 3



How do you write the ratio $\frac{3}{8}$ as a percent? Explain the steps you take.

Bonus Thinking Skills question on each practice page

Word Problems: Each unit ends with a page of short-answer and multiple-choice word problems so students are challenged to marry their computation skills with their quantitative-reasoning and problem-solving skills and grow more familiar with the types of problems they will encounter on standardized tests.

Word Problem Page

Name _____ Unit 4 • Word Problems • Ratios, Decimals, and Percents

Solve.

1 Taha finished 78% of her homework. What fraction of the homework did she finish? 2 Ben played in the 1st, 2nd, and 4th quarters of the game. He sat out the third quarter. What percentage of the game did Ben play?

3 Nine out of 25 students finished their work early on Tuesday. What percentage of the class finished their work early? 4 Twenty percent of the dogs at the pound needed medical care. What is the ratio of dogs that needed care to dogs that did not?

5 Is $\frac{4}{5}$ equal to 80%? Explain. 6 Is 0.6% equivalent to the decimal 0.6? Explain.

Circle the letter for the correct answer.

7 What decimal is equal to 1.3%? 8 What ratio is equal to 60%?

a) 0.013 a) $\frac{5}{7}$
 b) 0.13 b) $\frac{10}{75}$
 c) 13 c) $\frac{3}{4}$
 d) 13.0 d) $\frac{1}{4}$

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