Third Edition

Grade **4**

FINISH LINE

MATHEMATICS

Continental

Grades 1–8

**e Books**
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CONTENTS

Continental
inspire every learner

What does this series do?

Finish Line Mathematics, Third Edition provides instruction and practice to help students learn challenging Common Core-based standards. Concise, simply-presented lessons keep students focused and on task. Components include student workbooks, student answer booklets, and annotated teacher's editions in print and eBook formats.

e Books available

Grades 1–8
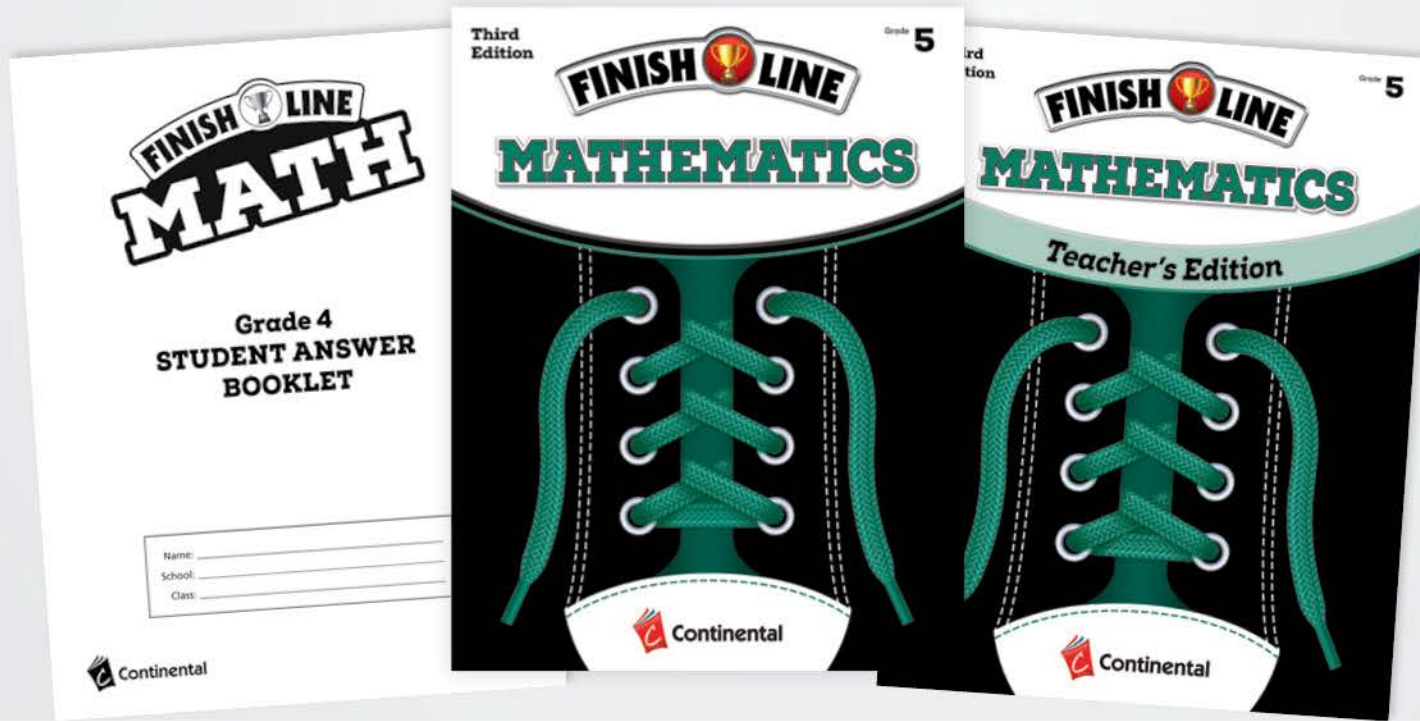
Standards Connection

Units parallel the domains of the Common Core State Standards.

300+ pages of instruction and practice

TABLE OF CONTENTS

Get Ready to Learn

The first unit reviews big ideas from the previous grade with four-to-five topics that are key to new concepts in the current grade. This allows students to refresh their skills in these areas before building on them to learn new ideas.

LESSON 3 — Measuring Length CCSS: 2.MD.1

Introduction

...rt length,
...ball field.

...e same
...h are **inches**
...y system of

...(yd)

$$5 - 3 = 2 \atop \uparrow \atop \text{Difference}$$

Addition and subtraction are inverse operations. That means they are opposites. Use addition to check subtraction.

...untertop is
...rd high.

...in this
...er than a

...measure
...e zero-end of
...bject.

Longer lengths are measured with yardsticks, meter sticks, and measuring tapes.

You can also

LESSON 2 — Subtracting Two- and Three-Digit Numbers CCSS: 2.NBT.5, 7

Introduction

...alled

...btract

UNIT 1 — Big Ideas from Grade 2

In grade 2, you learned how to compare numbers. You also solved word problems, measured length, and recognized shapes. Now you can use what you know about numbers and shapes to work with two- and three-digit numbers, measure objects, and understand polygons.

LESSON 1 Adding Two- and Three-Digit Numbers In this lesson, you will add numbers with two or three digits.

LESSON 2 Subtracting Two- and Three-Digit Numbers In this lesson, you will subtract numbers with two or three digits, using regrouping when necessary.

LESSON 3 Measuring Length In this lesson, you will measure or estimate length using different measuring instruments and units, such as inches, feet, or yards.

LESSON 4 Tiling Rectangles In this lesson, you will use tiling to find the area of rectangles.

LESSON 5 Polygons In this lesson, you will identify different types of polygons and practice drawing these shapes.

LESSON 1 — Adding Two- and Three-Digit Numbers CCSS: 2.NBT.5, 7

Introduction

To **add** means to combine to find a total. You can add in different ways. One way is to use place value.

A worker is stacking boxes. He has stacked 23 boxes. He needs to add 14 more boxes. How many will he stack in all?

Use place-value blocks to show 23.   Use place-value blocks to show 14.   Then combine the blocks. There are 3 tens blocks and 7 ones blocks. There is 37 in all.

You can stack numbers to add them. Line up the numbers by place value. Add the ones, then the tens. Then add the hundreds.

Hundreds | Tens | Ones
$$513 \atop +246 \atop \overline{759}}$$

Gradual Release Model

Part #1: Introduction

Each lesson begins with a brief explanation of the focus skill or concept with examples to illustrate. An open-ended *Think About It* question requires students to use critical thinking to work through an answer.

Vocabulary

LESSON 24 Solving Problems with Time

CCSS: 3.MD.1

Introduction

Solve problems using time to find how much time has gone past, or the **elapsed time.** You can also find the time something started or ended.

Yuri left for school at 8:15 A.M. It took him 25 minutes to get to school.

Add to find what time Yuri got to school.

8:15 ← Start Time
+0:25 ← Time Interval
8:40 ← End Time

Yuri arrived at school at 8:40 A.M.

Yuri left his friend's house at 4:12 P.M. and arrived home at 4:58 P.M.

4:58 ← End Time
−4:12 ← Start Time
0:46 ← Time Interval

It took Yuri 46 minutes to get home from his friend's house.

A number line can help you solve problems with time.

Elapsed time is also called a time interval.

Remember that the times between midnight and noon are A.M. times. The times between noon and midnight are P.M.

You will also use subtraction to find the start time when you know the end time and the elapsed time.

Think About It

What time does your school start in the morning? What time do you leave your house to go to school? Find the amount of time that goes by from the time you leave your house to the time your school starts. Why is this important to know?

LESSON 30 Understanding Area

CCSS: 3.MD.5.a, b; 6

Introduction

A **plane figure** is a flat surface. The size of the space inside the plane figure is its **area.** One way to measure area is to count the number of square units that cover a figure. A **square unit** is a square with a side of 1 unit. As long as the square units do not have gaps between them or overlap, the number of square units is the area of the figure.

Area is always measured in square units.

Look at the figure in red on the grid below.

☐ = 1 square unit

The red figure is made up of 6 square units. Its area is 6 square units.

A unit can be any measurement used for length. A square unit may stand for a square inch, square foot, or another square unit.

What is the area of the figure in red?

☐ = 1 square centimeter

Look at the key on the right. It shows that 1 square unit is equal to 1 square centimeter. The red figure is made up of 12 square units. So, its area is 12 square centimeters.

Think About It

Why might it be important to measure the area of something? What might area help you understand?

UNIT 6 Measurement and Data

Gradual Release Model

Part #2: Focused Instruction

Students are guided through two or more practice problems. Each problem includes a series of questions to help them work through the right answer. This practice helps build the skills needed to understand the main idea of the lesson. Focused Instruction is ideal for collaborative learning.

Hints and reminders

2 Focused Instruction
Lesson 24

Use subtraction to find the time something started when you know the time it ended and how much time passed. Use addition to find the end time when you know the time something started and how much time passed.

➤ Astrid finished her homework at 6:55 P.M. She had worked on her homework for 40 minutes.

What time did Astrid finish? _____

How much time had elapsed since she started? _____

Is the time she started before 6:55 or after 6:55? _____

Do you need to use subtraction or addition to find the time Astrid started her homework? _____

Use the correct operation to find the time she started her homework.

What time did Astrid start her homework? _____

As soon as she finished her homework, Astrid practiced piano for 25 minutes.

What time did Astrid start practicing her piano? _____

How long did she spend practicing? _____

What operation should you use to find the time Astrid finished practicing piano? _____

Use the correct operation to find the time she finished practicing piano.

When you add or subtract across an hour, you may need to regroup 60 minutes as 1 hour or 1 hour as 60 minutes.

2 Focused Instruction
Lesson 30

When figures are drawn on grids, you can see the square units inside. Always look at the key to see what each square unit shows.

➤ Two students are each asked to draw a figure with an area of 8 square inches. Which student, if either, is correct?

☐ = 1 square inch

What is the area of each square unit? _____

How can you find the area of each figure? _____

How many squares cover the figure student A made? _____

What is the area of student A's figure? _____

How many squares cover the figure student B made? _____

What is the area of student B's figure? _____

Did either student make a figure with an area of 8 square inches? _____

How can student A correct the figure to make it have the correct area? _____

How can student B correct the figure to make it have the correct area? _____

Count the squares inside the figures.

Is the area greater than 8 square inches or less?

Gradual Release Model

Part #3: Guided Practice

It's time to apply the strategies learned in part #2. In this section, open-ended problems require students to show their work, make a graph, draw a diagram, or do other mathematical tasks to answer questions.

Hints and reminders

3 Guided Practice — Lesson 24

Solve the following problems.

1 Bryan worked on a science project from 10:07 A.M. to 10:49 A.M. How many minutes did he work on his project?

Should you add or subtract to find the elapsed time?

Answer _____ minutes

2 Baz got to the library at 7:45 A.M. He read the sign on the library. How long will he have to wait before the library opens?

PUBLIC LIBRARY
Daily Hours
9 A.M.–6 P.M.

Answer _____

3 The elementary music program began at 7:00 P.M.

Part A The first half of the program ended at 7:46. There was a 12-minute break before the second half started. What time did the second half start? Show your work.

Answer _____

Part B The second half of the program lasted 38 minutes. How long was the entire elementary music program? Show your work.
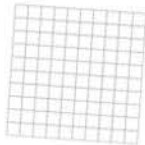
Remember to include the break as part of

3 Guided Practice — Lesson 30

Solve the following problems.

1 On the grid below, draw a figure that has an area of 40 square units.

Remember that unit squares cannot have gaps or overlap.

2 What is the area of the figure?

☐ = 1 square unit

Count the number of unit squares that make up the figure.

Answer _____ square units

3 What is the area of the figure?

☐ = 1 square centimeter

How many rows of squares are there? How many squares are in each row?

Answer _____ square centimeters

Gradual Release Model

Part #4: Independent Practice

Students are ready to answer questions on their own without any help or hints. They will encounter traditional multiple-choice and open-ended questions, as well as item types typical on Common Core-based assessments, including:

- Perform computations
- Plot points on a coordinate plane
- Answer questions with more than one right answer
- Complete a table
- Measure or draw a figure

Reviews

Each unit concludes with a review to test all skills covered in the unit. It includes a mix of assessment-type items in the same way as the Independent Practice section.

CCSS: 3.NBT.1–3

UNIT 3 REVIEW
Number and Operations in Base Ten

Solve the following problems.

1. Which numbers round to 2,100 when rounded to the nearest hundred? Select the **two** correct answers.

   A 2,049

   B 2,149

   C 2,150

   D 2,009

   E 2,109

2. Subtract 399 from 501. Show your work.

   Answer _____

3. Zoe multiplied 6 × 50 = 300. Why are there two zeros in the product?

   _____

---

4. Look at the addition number sentence below.

   $$455 + 149 = \square$$

   Part A Add 455 to 149. Then round the sum to the nearest ten. Show your work.

   Answer _____

   Part B Round 455 and 149 to the nearest tens. Then add the sums. Show your work.

   Answer _____

5. Parker wants to find the difference between 800 and 378.

   Part A Subtract 800 − 378. Show your work.

   Answer _____

   Part B How can you use addition to check your answer in Part A?

---

6. Subtract 504 − 198.

   A 306

   B 316

   C 406

   D 416

7. Find the product of 6 × 60.

   A 360

   B 366

   C 420

   D 660

8. The distance from Javier's house to his grandparents' house is 372 miles. He thinks this is about 300 miles. Is this correct? Explain.

   _____

   _____

9. Mrs. Turner wrote these directions on the board.

   • Subtract 154 from 395. Then round the difference to the nearest ten.

   • Round 154 and 395 to the nearest ten. Then find the difference.

   Chris followed these directions. Which set of directions will give Chris a larger number? Show your work.
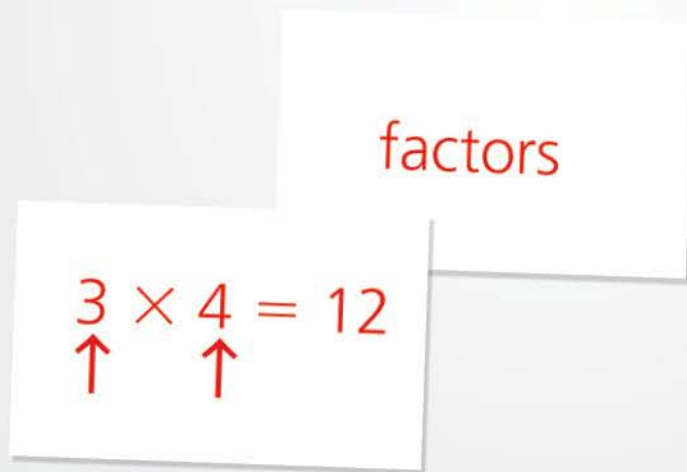
   Answer _____

Resources

Glossary

A glossary includes words and terms that appear in boldface throughout the book, along with their definitions.

Flash Cards

Students can cut out the flash cards to practice important ideas, formulas, and symbols from the book. They can make their own using the blank cards provided.

factors

$3 \times 4 = 12$

GLOSSARY

A
   add: to put together

   addends: numbers that are added in an addition problem to find a sum

   addition table: a table that shows the sums of all combinations of one-digit numbers

   angle: a figure formed by two rays that share an endpoint and extend in different directions

   area: the amount of space inside a figure, measured in square units. The area formula for a rectangle is Area = length × width.

   array: a model using rows and columns of symbols or shapes

   associative property: allows grouping of numbers with parentheses to be added or multiplied: $a + (b + c) = (a + b) + c$ and $a \times (b \times c) = (a \times b) \times c$

B
   bar graph: a data display that uses bars to show data

C
   capacity: the measure of how much liquid something holds; also called *liquid volume*

   centimeter: a small unit of length in the metric system. A centimeter is about the width of a finger.

   clock: a tool used to tell time

   commutative property: allows numbers to be added or multiplied in any order: $a + b = b + a$ and $a \times b = b \times a$

   compare: to decide which number is greater than or less than another number

   customary system: a system of measurement used in the United States. It measures length using inches, feet, yards, and miles.

D
   data: information

   denominator: the number of parts in a whole or set, the number on the bottom of a fraction

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Independent Practice

7   Part A _____

Part B _____

Part C $_____

PAGES 36–43   Lesson 5: Data Distribution and Displays
Introduction, Think About It

Focused Instruction

➤ The students in Mrs. Gable's class measured their heights and recorded them.

12

Focused Instruction

➤ What will be the maximum and minimum values on the number line?
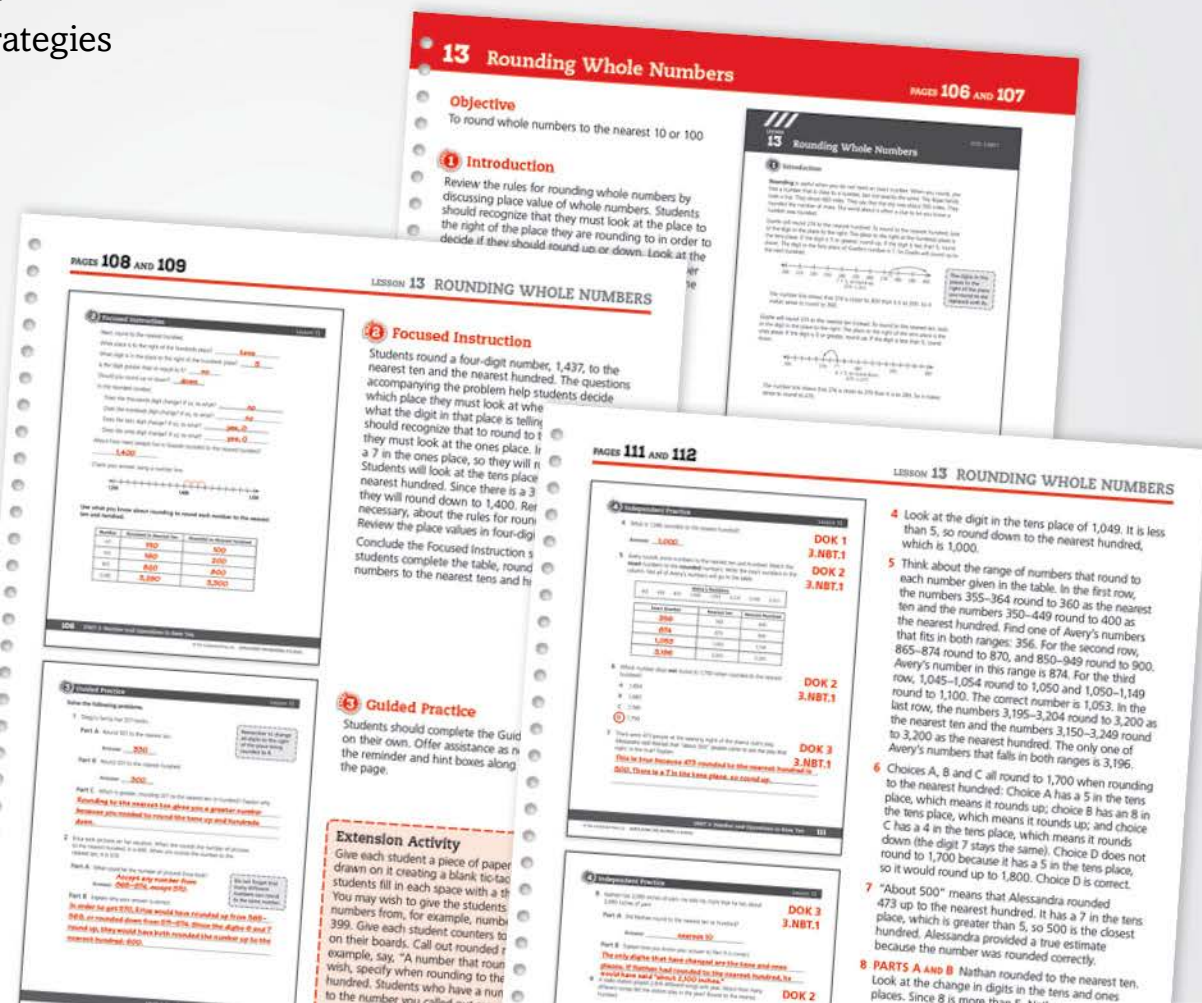
➤ What intervals will you use for the data?

1 _____
2

Teaching Support

Annotated teacher's editions include:

- Suggestions for use/teaching strategies
- Connections to the Standards for Mathematical Practice
- Common Core correlations
- Depth of Knowledge (DOK) for each item
- Annotated student pages and answer rationales
- Hands-on extension activities

eBooks

Continental's eBooks go where you and your students need to be, making them ideal for both distance and blended learning models. Our printed books are delivered online with features to help you personalize instruction and make the most of practice time.

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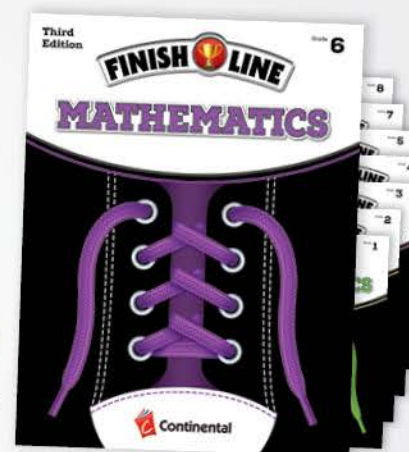## Student Answer Booklet Sets

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Grades 1–8

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