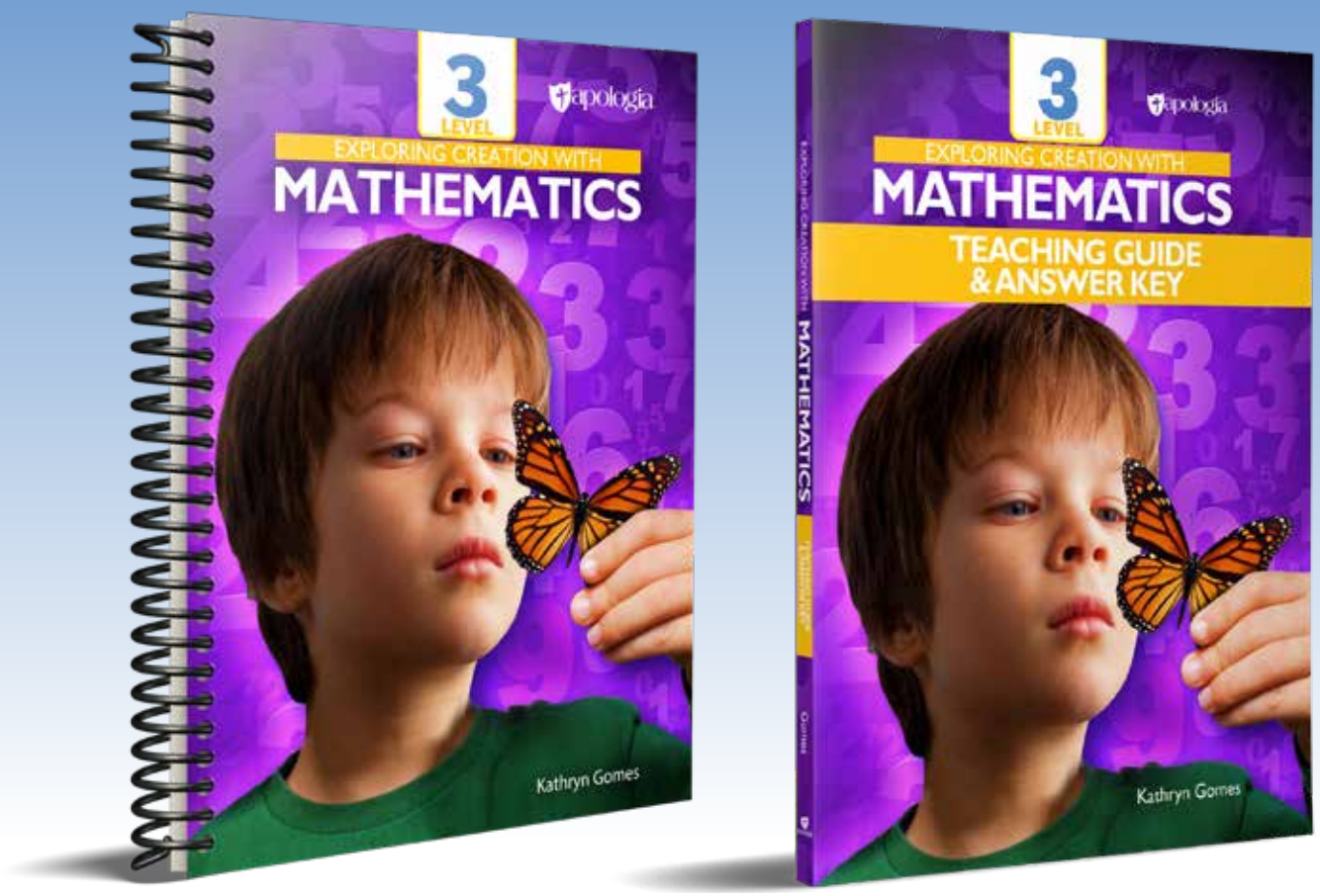
3
LEVEL

apologia

EXPLORING CREATION WITH

MATHEMATICS

Kathryn Gomes



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UNIT 1

ADDITION AND SUBTRACTION UP TO 1000

You are about to start a new math book, about to learn lots of new things, and try a bunch of fun activities and projects. But before we jump in, let's pause and think about our main purpose in doing this… our main purpose in doing everything we do each day.

Colossians 3:17

Whatever you do, in word or in deed, do everything in the name of the Lord Jesus, giving thanks to God the Father through him.

Skills Practice for Unit One:

Two-digit addition and subtraction (see answer key page 14 for more details)

It might seem strange to think about completing the math in this book "in the name of the Lord Jesus." But the Bible tells us that we can bring glory to God through everything we do each day, even the simple things like learning math. Here are three ways we can bring glory to God as we learn.

Learn with Joy

Math is a part of creation and all aspects of creation point to the Creator in some way. Learning mathematics is just one step on the journey of discovering more about God. And because of that, we can come to this subject excited, curious to see what new things we will discover.

Learn with Gratitude

Education is a gift, and it is one we should never take for granted. It is a blessing that you have a book and the supplies you need to learn math this year. An even greater blessing is that your parent has committed time to teach you and help you. When we face a difficult lesson or struggle to be motivated on a particular school day, it is good to remind ourselves that it is a privilege to learn and we should be grateful.

Learn with Faith

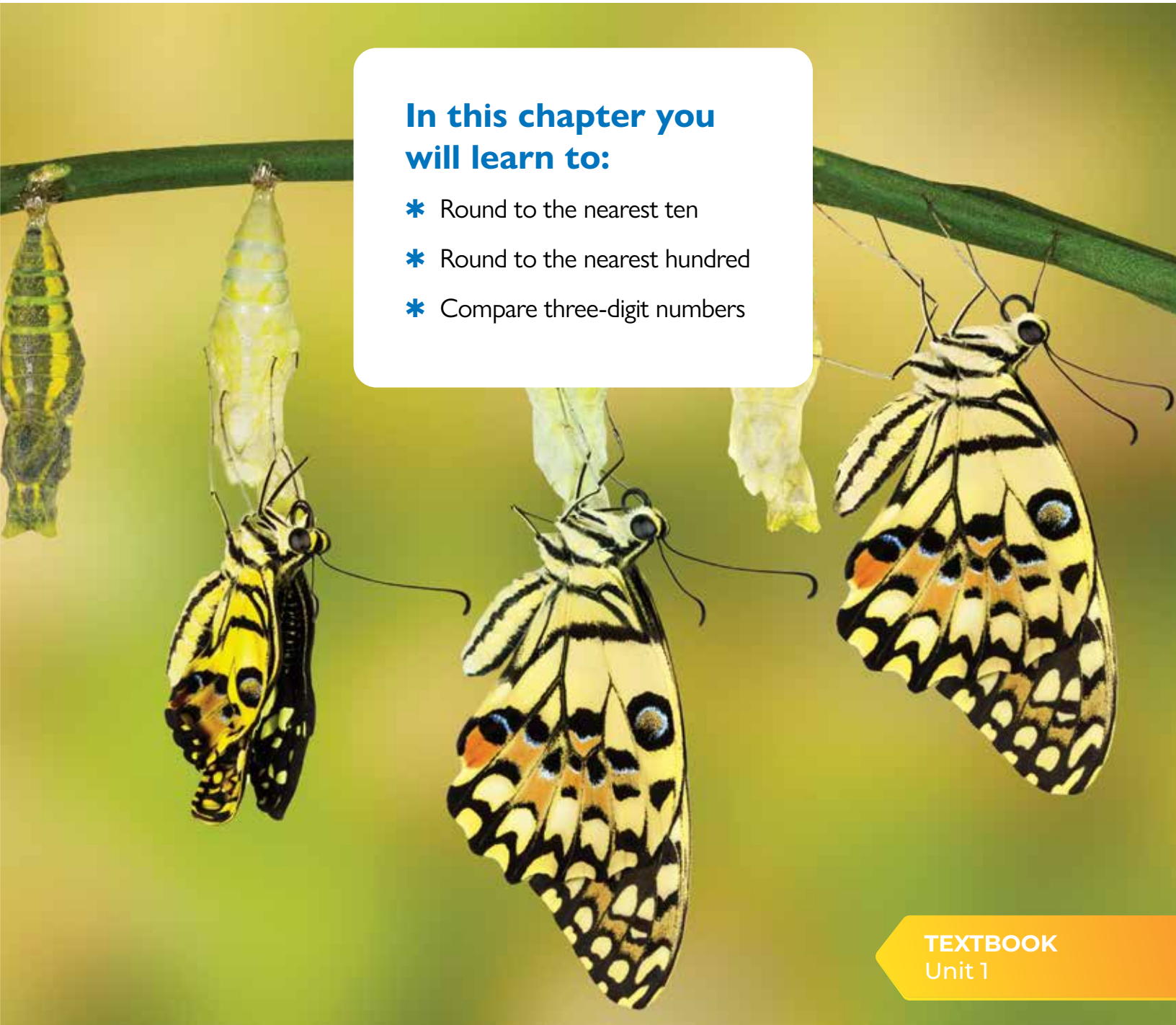
God is for you and ready to help you as you learn math this year. He created all of the math in this book, and He fully understands it. He can help you learn it, too. So, open up this book each school day with faith that God has gone before you and will help you.

We can bring glory to God in all the small parts of our day. He cares about all the little details and the attitudes in our hearts. Take a moment to pray that God will fill you with joy, gratitude, and faith as you seek to glorify Him this year.

CHAPTER

1

NUMBERS TO 1000



In this chapter you will learn to:

* Round to the nearest ten
* Round to the nearest hundred
* Compare three-digit numbers

TEXTBOOK
Unit 1

RIGHT DIGIT, RIGHT PLACE

You Will Need:

- [ ] Paper
- [ ] Pencil

You Will Do:

1. Have your parent pick a secret number that is less than 1000 and has no repeated digits. Your job is to guess their number.
2. Write your first guess in the left column.
3. Now your parent looks at your guess. They write down how many digits are correct and then how many of them are in the correct place. The sample gameboard demonstrates this.
4. Continue guessing until you get the number right. If you realize a certain digit definitely isn't in the number, then cross it off at the top. In the example, the student knew that 2, 3 and 7 weren't in the answer.

Sample Gameboard

0 1 ~~2~~ ~~3~~ 4 5 6 ~~7~~ 8 9		
Guess	Digit	Place
245	1	0
723	0	0
518	2	1
561	3	3

0 1 2 3 4 5 6 7 8 9		
Guess	Digit	Place

Place Value

Place value is a system where the place of a digit affects its value. If you change the order of the digits, you get a different number. Look at these two examples.

Place Value Chart

341
three hundred forty-one

Hundreds	Tens	Ones
3	4	1

413
four hundred thirteen

Hundreds	Tens	Ones
4	1	3

Practice

Circle the value of the red digit.

590 500 50 5	272 200 20 2
370 700 70 7	486 600 60 6
124 100 10 1	907 700 70 7

Practice

Look at the numbers below. Write the correct number in each blank. There is only one correct choice for each blank.

604	929	173	218	316	833
714	296	581	529	972	597

A number less than 200	
A number between 900 and 950	
A number with the same tens and ones digit	
A number that has 7 ones	
A number that has 7 hundreds	
A number with zero tens	
A number between 200 and 250	
A number that has 8 tens	
A number with 3 hundreds	
A number that is less than 5 away from 300	
A number between 500 and 550	
A number with 2 ones	

MOVE TO THE NEAREST TEN

You Will Need:

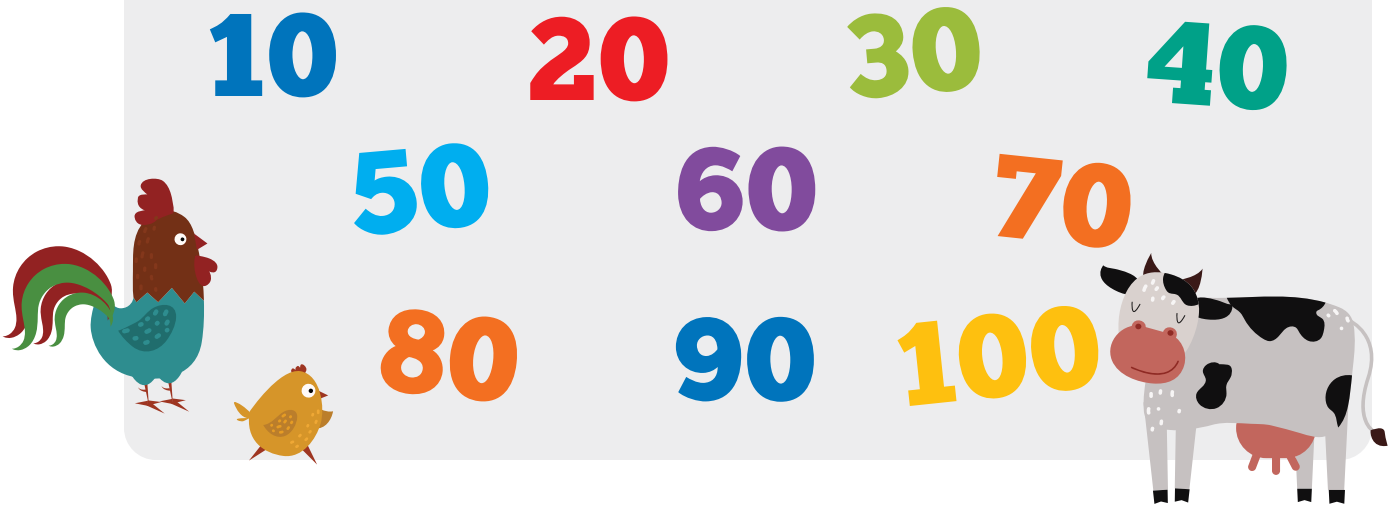
- [ ] 5 unit cubes from the base ten blocks set
- [ ] 20 Numbered cards with the numbers 0 to 9 (See comment in Answer Key)

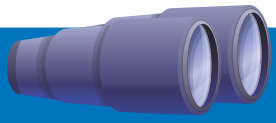
You Will Do:

1. Shuffle the numbered cards and put them in a pile face down. Draw two cards and use the results to make a two-digit number. The order of the digits is up to you.
2. Use a unit cube to mark the chart below with the number you created.
3. Now slide your cube to the closest tens number. These numbers are highlighted in blue. You may need to slide your piece left or right. If your number ends in a 5, it will be right in the middle of the chart. Slide right to the higher tens number. The numbers 95 to 99 round up to 100.
4. Repeat by drawing pairs of cards 4 more times and following steps 2-3.
5. Have your parent check your answers. Tell them how you made your decisions.

0	1	2	3	4	5	6	7	8	9	10
10	11	12	13	14	15	16	17	18	19	20
20	21	22	23	24	25	26	27	28	29	30
30	31	32	33	34	35	36	37	38	39	40
40	41	42	43	44	45	46	47	48	49	50
50	51	52	53	54	55	56	57	58	59	60
60	61	62	63	64	65	66	67	68	69	70
70	71	72	73	74	75	76	77	78	79	80
80	81	82	83	84	85	86	87	88	89	90
90	91	92	93	94	95	96	97	98	99	100

Rounding to Tens





Rounding: making a number simpler by changing it to another close by number.

Steps for Rounding:

1. Underline the digit you are rounding.
2. Look at the digit to the right of the underlined digit.
3. If it is 5 or above, give it a shove! (round up)
4. If it is 4 or below, let it go. (round down)

Tens numbers are easier to add and subtract. Because of this, it can be helpful to round other numbers to the nearest tens number. Sometimes you will round the number up to the closest tens number.

$$78 \longrightarrow 80$$

And sometimes you will round the number down to the closest ten number.

$$53 \longrightarrow 50$$

How do you know if you should round up or down? If the ones digit is 4, 3, 2, or 1, you should round down to the nearest ten.

$64 \rightarrow 60$ $22 \rightarrow 20$
$73 \rightarrow 70$ $81 \rightarrow 80$

If the ones digit is 5 or higher, you round up to the nearest ten.

$85 \rightarrow 90$ $48 \rightarrow 50$
$36 \rightarrow 40$ $29 \rightarrow 30$
$67 \rightarrow 70$

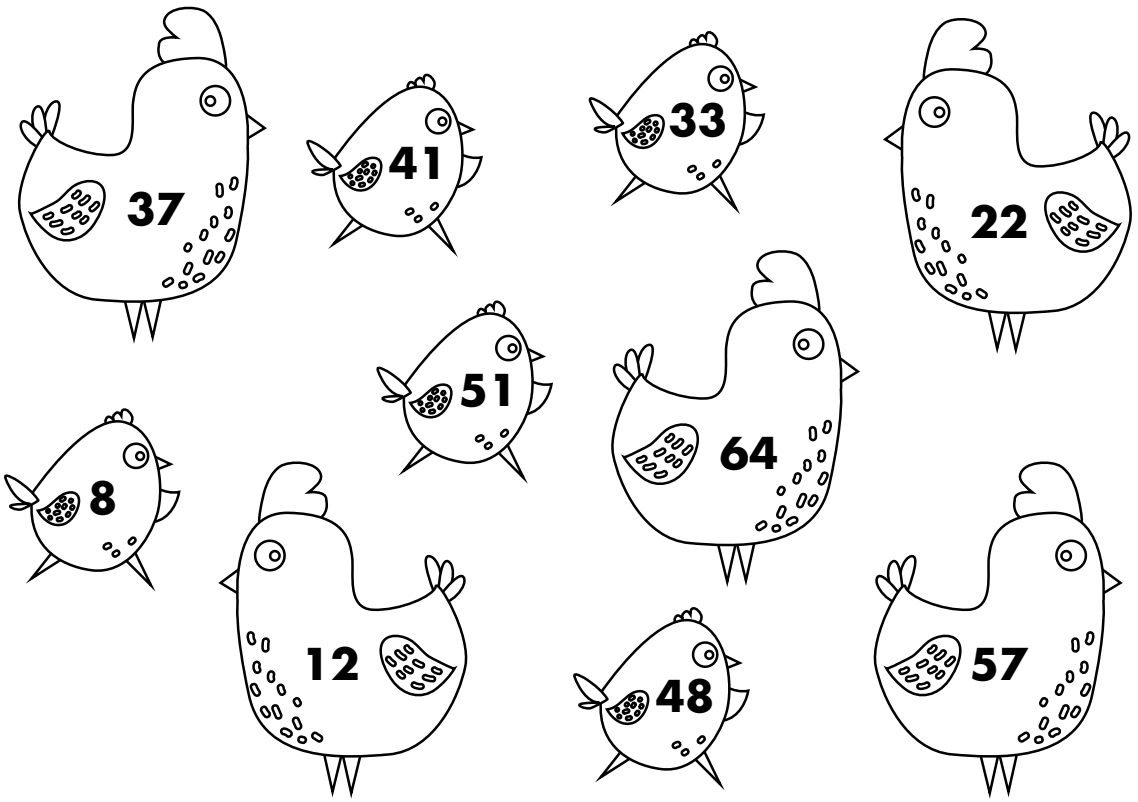
If your number is between 95 and 99, you round to 100. 100 is a tens number because 10 tens make 100.

Practice

Round each number to the nearest tens number. Then color in the bird with the correct color.

Color Key:

10 = red	30 = blue	50 = green
20 = orange	40 = purple	60 = yellow



Challenge!

Round 98 to the nearest ten.
Hint: look at the chart in the opening activity.

98 → ☐

ROLL AND ROUND (TO THE NEAREST TEN)

You Will Need:

- ☐ A pair of dice
- ☐ A colored pencil
- ☐ Scratch paper

You Will Do:

1. Roll the dice. Use the numbers on the dice to write down a two-digit number on scratch paper. You can choose the order of the digits.
2. Round the two-digit number to the nearest ten. Color in that space on the game board below.
3. Continue rolling until you are able to color in 5 spaces in a straight line.

10	50	60	60	70
20	40	70	50	50
30	30	10	40	30
40	20	20	30	20
50	10	40	20	10
60	70	60	10	60

Rounding to Hundreds

In the last lesson, you learned how to round to the nearest ten. In this lesson, we will round to the nearest hundred. The steps are the same, we will just be rounding to a different digit.

Steps for Rounding:

1. Underline the digit you are rounding.
2. Look at the digit to the right of the underlined digit.
3. If it is 5 or above, give it a shove! (round up)
4. If it is 4 or below, let it go. (round down)

Example: Round 431 to the nearest hundred.

First, underline the hundreds digit.

4̲31

Now look to the right of that digit. Is it 5 or above or 4 or below?

4̲31

The digit is a 3, so we will round down to the closest hundred.

400

Example: Round 574 to the nearest hundred.

5̲74

First, underline the hundreds digit.
Now look to the right of that digit.
Is it 5 or above or 4 or below?

5̲74

The digit is a 7, so we will round up to the closest hundred.

600

The ones digit is a 4, but that doesn't matter. We only need to look at the tens digit.

Practice

Round each number to the nearest hundred.

264	_____	637	_____	239	_____
189	_____	350	_____	719	_____

Round each number to the position of the digit underlined, either the nearest 10 or the nearest 100.

6<u>5</u>2	_____	2<u>1</u>1	_____	7<u>0</u>7	_____
<u>6</u>52	_____	<u>2</u>11	_____	<u>7</u>07	_____

The average adult North African ostrich weighs about 245 pounds. Round its weight of 245 to the nearest ten. Round its weight of 245 to the nearest 100.

Nearest ten: _____ pounds

Nearest hundred: _____ pounds

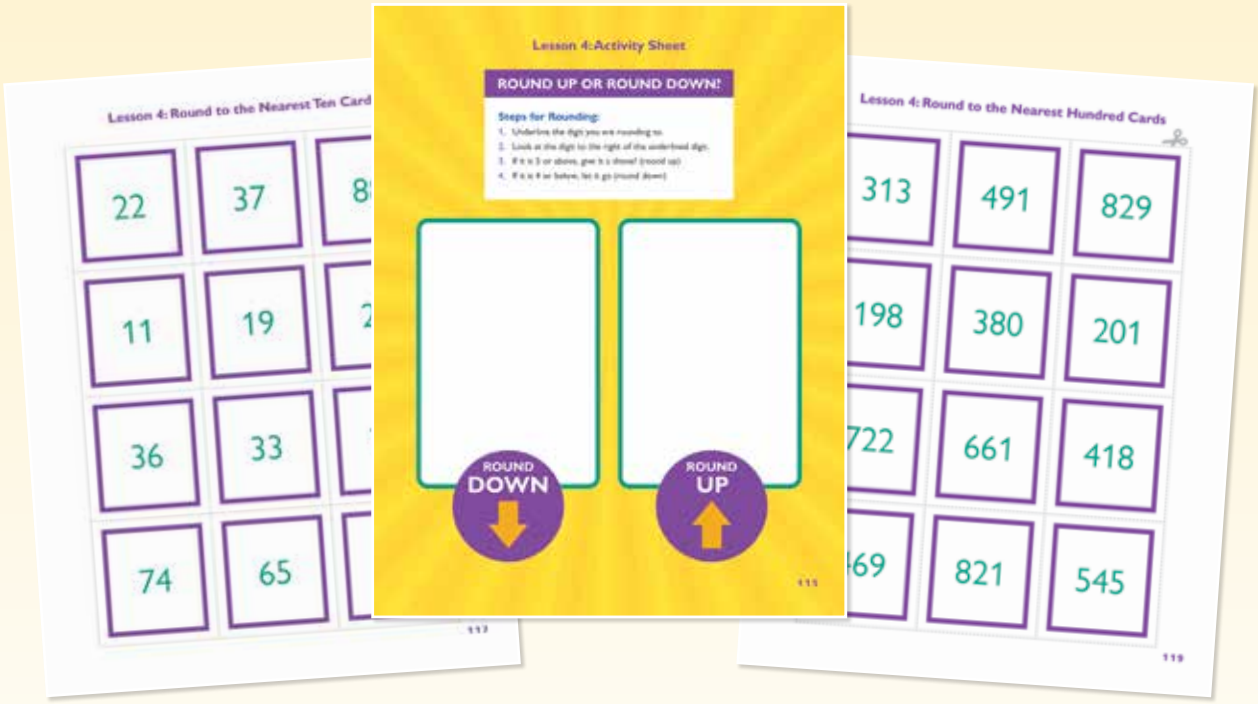
ROUND UP OR ROUND DOWN?

You Will Need:

- [ ] Lesson 4 Activity Sheets (in the back of the answer key)
- [ ] Scissors

You Will Do:

1. Carefully tear out your Round Up or Round Down mat from the back of the answer key. Then tear out the Round to the Nearest Ten sheet and cut apart the two-digit numbers.
2. Practice sorting them on the mat according to whether you'd round them up or down to the nearest ten. Check your answers with your parent.
3. Carefully tear out the Round to the Nearest Hundred sheet and cut apart the three-digit numbers.
4. Practice sorting them on the mat according to whether you'd round them up or down to the nearest hundred. Check your answers with your parent.



Practice

Round each number to the nearest ten.

36 _____ 409 _____

72 _____ 278 _____

89 _____ 531 _____

42 _____ 982 _____

66 _____ 713 _____

Round each number to the nearest hundred.

411 _____ 309 _____

789 _____ 711 _____

517 _____ 650 _____

561 _____ 467 _____

245 _____ 384 _____

ROLL AND ROUND (TO THE NEAREST HUNDRED)

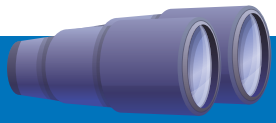
You Will Need:

- [ ] 3 dice
- [ ] Colored pencils
- [ ] Two players

You Will Do:

1. Player 1 rolls the dice and uses the numbers on the dice to make a three-digit number. Player 1 can choose the order of the digits.
2. Player 1 rounds the three-digit number to the nearest hundred and colors in that space on the game board below.
3. Player 2 rolls the dice and makes a three-digit number. Player 2 can choose the order of the digits.
4. Player 2 rounds the three-digit number to the nearest hundred and colors in that space on the game board below.
5. The players continue to take turns rolling, rounding, and coloring in spaces. The first player to color in 5 spaces in a row, column, or diagonal wins. If there are no spaces available to color, the player's turn is over. If no player can make 5 spaces in a line, the one with the most colored spaces wins the game.

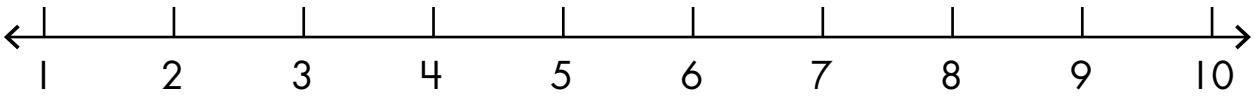
100	500	600	600	700
200	400	700	500	500
300	300	100	400	300
400	200	200	300	200
500	600	400	200	100

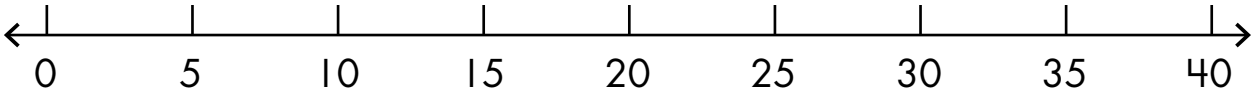


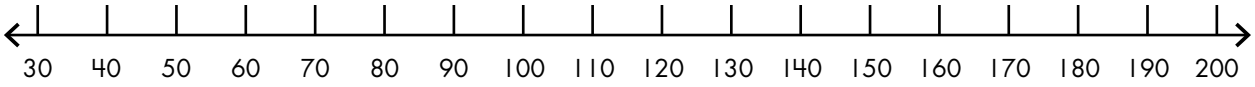
Number line:
A line with evenly spaced numbers on it.

Number Lines

A **number line** is one way we can picture the order of numbers. Number lines can increase by 1's, 5's, 10's, or another consistent amount. They always increase by the same amount each time. Look at the examples of number lines below.



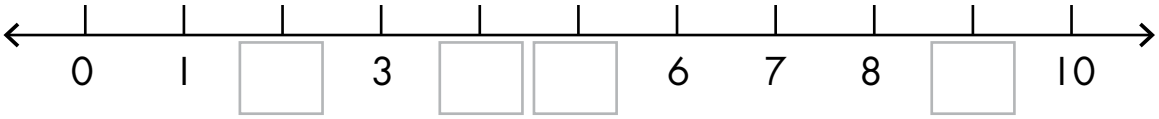


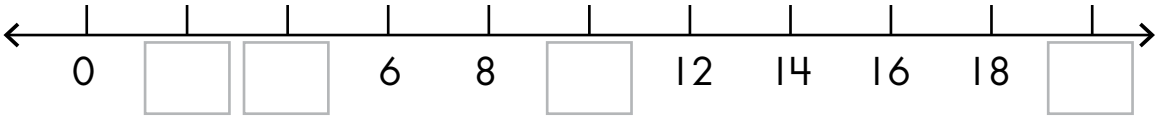


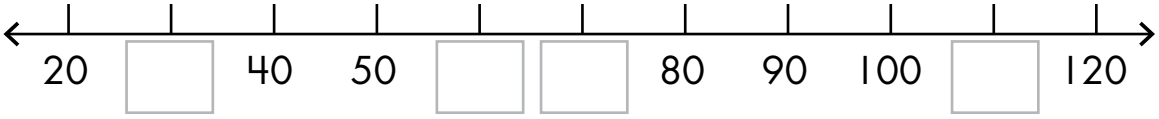
Number lines don't always start at zero. They can start at any number as long as they increase by the same amount each time.

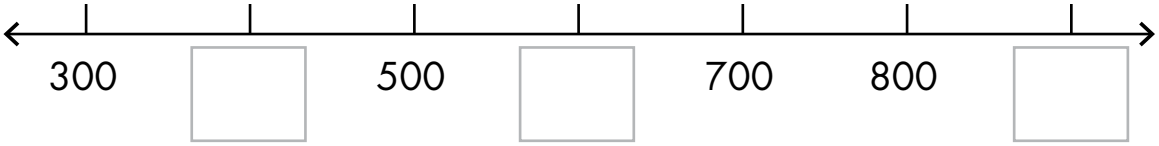
Practice

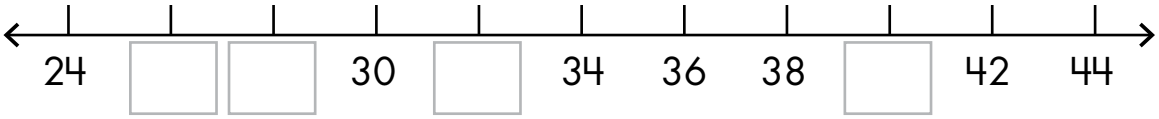
Look at each number line and determine how it is increasing. Fill in the missing numbers on each number line.

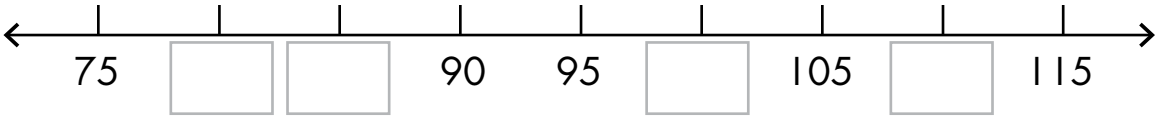
1. 

2. 

3. 

4. 

5. 

6. 

Practice

Draw a dot on the number line showing where each number would be located. Then round the number to the nearest ten. The first one has been done for you.

32 30

48 _____

71 _____

65 _____

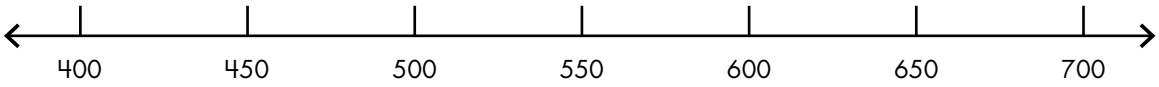
57 _____

28 _____

17 _____

13 _____

Draw a dot on the number line showing where each number would be located. Then round the number to the nearest hundred.



413 _____

678 _____

649 _____

464 _____

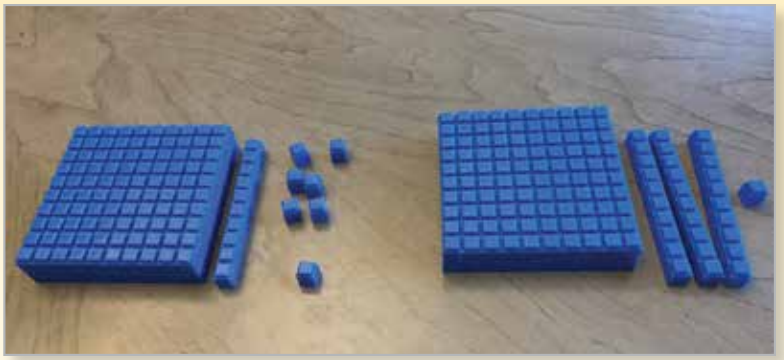
530 _____

562 _____

BUILD AND COMPARE

You Will Need:

- ☐ Base ten blocks

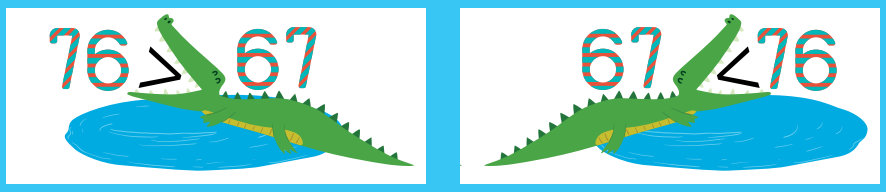


You Will Do:

1. We are going to decide which of the three-digit numbers below is greater.
2. Start by building each number with base ten blocks.
3. Compare the two sets of blocks. Which one represents more cubes?
4. Circle the greater number.

217 231

Comparing Numbers

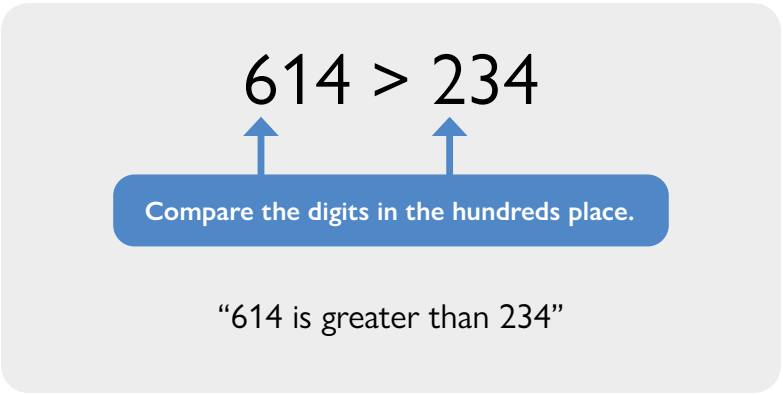


76 is greater than 67. 67 is less than 76.

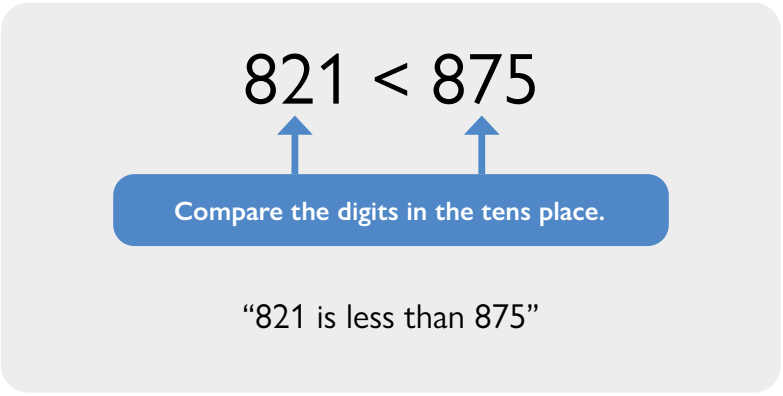
When we compare numbers, we use symbols to show that one number is greater than, less than, or equal to another number. Review these three math symbols below.

422 > 205	119 < 780	645 = 645
422 is greater than 205.	119 is less than 780.	645 is equal to 645.

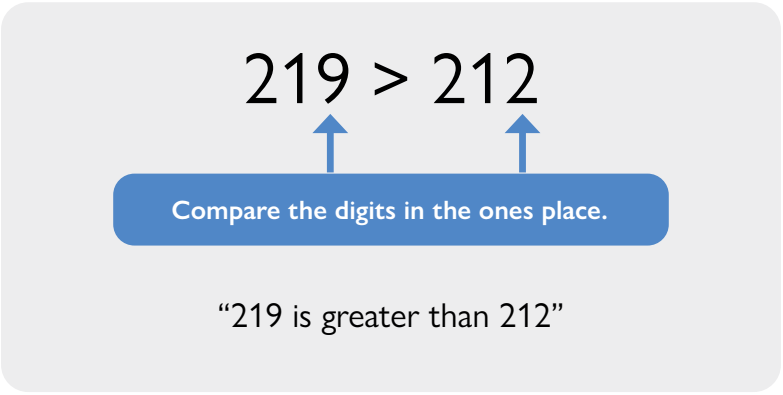
Remember that when we compare numbers, we look at the digits in the greatest place first. If we are comparing three-digit numbers, we start by comparing the hundreds digit.



If the hundreds digits are the same, we then compare the tens digits.



We only compare the ones digits if the hundreds and the tens digits are the same.



Practice

Compare each of the numbers below.
Write in the > , < , or = symbol.

487 ◯ 103	920 ◯ 980
278 ◯ 336	334 ◯ 327
273 ◯ 273	872 ◯ 693
145 ◯ 541	166 ◯ 167

The chart below shows which birds were spotted on Hawk Mountain in the fall of 2018. Put the birds in order from least frequently seen to the most frequently seen by writing their names in the correct order on the lines below.

Type of bird	Bird count
Bald Eagle	541
Blue Jay	980
Turkey Vulture	543
Cooper's Hawk	591

Hawk Mountain Sanctuary is in Berks County, Pennsylvania.

Bald eagle

_____, _____, _____, _____

Mixed Review

Skills Check

You should have been practicing adding two-digit numbers each day as part of your skills practice. Here are a few more for you to try.

$$\begin{array}{r} 45 \\ +\ 23 \\ \hline \end{array} \qquad \begin{array}{r} 28 \\ +\ 22 \\ \hline \end{array} \qquad \begin{array}{r} 67 \\ +\ 19 \\ \hline \end{array}$$

Round each number to the nearest ten.

46 _____

61 _____

893 _____

377 _____

Round each number to the nearest hundred.

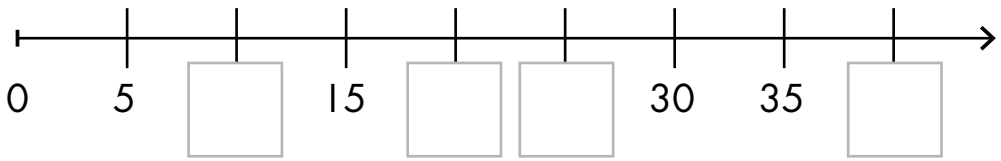
516 _____

298 _____

607 _____

751 _____

Look at the number line and fill in the missing numbers.



Compare each of the numbers below. Write in the > , < , or = symbol.

197 ◯ 179

303 ◯ 278

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EXPLORING CREATION WITH

MATHEMATICS

TEACHING GUIDE & ANSWER KEY

Kathryn Gomes

TABLE OF CONTENTS

WEEK-BY-WEEK DAILY SCHEDULE

Below is a suggested weekly schedule to help you stay on track. It uses a four-day week to leave room for a co-op day or a review day. Please feel free to adjust it to the needs of your child and your family's calendar. Since the suggested schedule covers 30 weeks, there is plenty of room for personal modifications.

WEEK	DAY 1	DAY 2	DAY 3	DAY 4
1	☐ UNIT 1 Intro CHAPTER 1 Lesson 1 Skills practice: adding two-digit numbers	☐ CHAPTER 1 Lesson 2 Skills practice: adding two-digit numbers	☐ CHAPTER 1 Lesson 3 Skills practice: adding two-digit numbers	☐ CHAPTER 1 Lesson 4 Skills practice: adding two-digit numbers
2	☐ CHAPTER 1 Lesson 5 Skills practice: adding two-digit numbers	☐ CHAPTER 1 Lesson 6 Skills practice: adding two-digit numbers	☐ CHAPTER 1 Chapter Review	☐ CHAPTER 2 Lesson 7 Skills practice: subtracting two-digit numbers
3	☐ CHAPTER 2 Lesson 8 Skills practice: subtracting two-digit numbers	☐ CHAPTER 2 Lesson 9 Skills practice: subtracting two-digit numbers	☐ CHAPTER 2 Lesson 10 Skills practice: subtracting two-digit numbers	☐ CHAPTER 2 Lesson 11 Skills practice: subtracting two-digit numbers

TEACHER'S NOTES

UNIT 1: ADDITION AND SUBTRACTION UP TO 1000

SUPPLY LIST

Skills Practice:

- 6 Notecards
- Numbered cards (such as Uno cards)
- A paperclip
- 2 Dice
- Base ten blocks

Chapter 1:

- 5 pennies or another type of counter
- 3 Dice
- Colored pencils
- Numbered cards (such as Uno cards)
- Scissors
- Base ten blocks

Chapter 2:

- 3 Dice
- Colored pencils
- Base ten blocks
- Scissors
- Glue
- Numbered cards (such as Uno cards)
- A paperclip
- 30 Pennies (or another type of counter)

As you start this book with your child, I want you to know that I prayed for your family as I wrote it. My goal is to bring glory to God as I write (and care for my own three kids). As I tested the activities with my children and the tester families, as well as incorporated feedback from my copy and technical editors, I remembered that everything we do can bring God glory. Even the most mundane task can be holy if we do it unto Him. That reality changes the way I write math lessons and my attitude when my littlest one finds the glitter. As you open up this book and begin to teach your child third grade math, I pray that you too can see it as an opportunity to glorify God. He sanctifies our most ordinary moments.

May you teach your child with joy, knowing that wonderful truths about God's character are in these pages. May you teach your child with gratitude, appreciating this opportunity to educate them. And may you teach them with faith as you remember the words of the Psalmist.

One generation will declare Your works to the next and will proclaim Your mighty acts.

Psalm 145:4

SKILLS PRACTICE FOR UNIT ONE: TWO-DIGIT ADDITION AND SUBTRACTION

You will notice that in the beginning the skills practice overlaps with second grade. This is intentional because most students need a refresher after a summer off.

Skill One: Adding two-digit numbers

This is a second-grade level skill, but most students will have lost some ground over the summer. We want them to sharpen these skills as they prepare for regrouping with three-digit numbers. You might spend more or less time on this skills practice depending on their skill level. The best thing is to spend 5-10 minutes practicing the skill each day. Some students will be fine only working on the skill every other day. But spaced repetition is the key, they need to see it again and again for a little bit rather than have one long review session. This is what helps them get the skill into their long-term memory. Here are some different ways to practice.

1. Notecard facts. Write a two-digit addition problem for them on a notecard and have them solve it. Rotate between problems that require regrouping and those that don't.
2. Practice with the addition worksheets that are available on the Book Extras website.
3. Print a copy of the Two-Digit Addition spinners off of the Book Extras website. Hold a paper clip in the center of each spinner with a pencil to spin it. Spin once on each spinner to get two numbers and find their sum.
4. Play "Make the Greatest" which is described below.

Activity: Make the Greatest

You Will Need:

- ☐ 2 players
- ☐ Numbered cards with the digits 0 to 9 (Uno cards work well)

You Will Do:

1. Each player is dealt four cards. Using each card only once, they make two 2-digit numbers using the cards as the digits.
2. Each player adds their two numbers together. The player with the largest sum wins that round. Three rounds make a game.

Skill Two: Subtracting two-digit numbers

Again, this is a second-grade skill but the regrouping can be tricky, and we want to make sure their skills are sharp as they move into three-digit numbers. Here are some different ways they can practice.

1. Notecard facts. Write a two-digit subtraction problem for them on a notecard and have them solve it. Rotate between problems that require regrouping and those that don't.
2. Practice with the subtraction worksheets that are available on the Book Extras website.
3. Play "race to zero." Each player starts with 50 in base ten blocks, 4 ten rods and 10 unit cubes. Players take turns rolling a pair of dice. They can arrange the numbers on the dice to make a two-digit number. They subtract that number from their starting amount of 50. Players continue taking turns until someone reaches zero (You don't have to get exactly zero).
4. Use the Two-Digit Subtraction Spinners on the Book Extras website. Hold a paper clip in the center of each spinner to spin it. Spin once on each spinner to get two numbers and find their difference. Be sure to subtract the smaller number from the larger.

Skill Three: Rounding and estimating with two-digit numbers

Students learn how to round to the nearest ten in unit one, but they'll need a little more repetition and practice, so it is included here in the skills practice. They'll be rounding two-digit numbers to the nearest ten. They will review rounding three-digit numbers in the unit two skills practice. Here are some different ways to practice.

1. Play "Roll and Round (to the nearest ten)" from Lesson 3. You can find a copy of the game board on the Book Extras website.
2. Repeat the "Round Up or Round Down" activity from lesson 4. You can even create your own numbered cards, just be sure to tell them if they should round to the nearest hundred or ten.
3. There are rounding and estimating worksheets available on the Book Extras website.

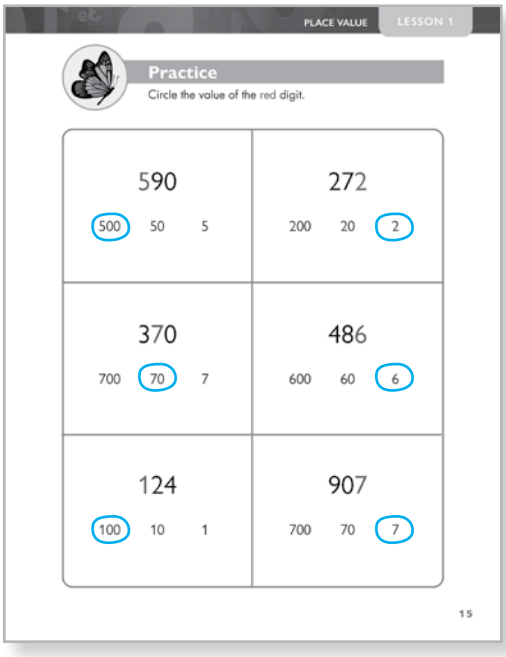
CHAPTER 1: ADDITION AND SUBTRACTION UP TO 1000

LESSON 1

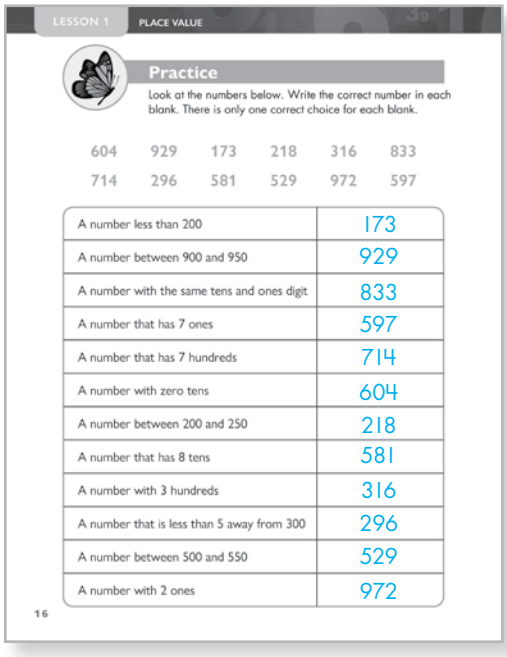
We start off the year with a game in the opening activity so the student can review place value and also have some fun. If you feel like they need to ease into it, try a two-digit number first. You can also pick a three-digit number, but give them one of the digits as a hint.

The first two chapters of this book are review. We want to refresh your student's knowledge of place value, addition, and subtraction before we jump into multiplication and division, which is the real heart of 3rd grade math. Different students will begin the year at different places depending on their math background and how much they lost or retained over the summer. Your child might whiz through these first two chapters, but they are still refreshing their memory. Or they might get stuck at points. Even if you have to go slower than the suggested pacing guide, that's better than rushing into new skills in unit 2 without the background and solid foundation needed to succeed as we build skills. The main thing is to take the time needed to reinforce these foundational skills now.

Page 15 Answers



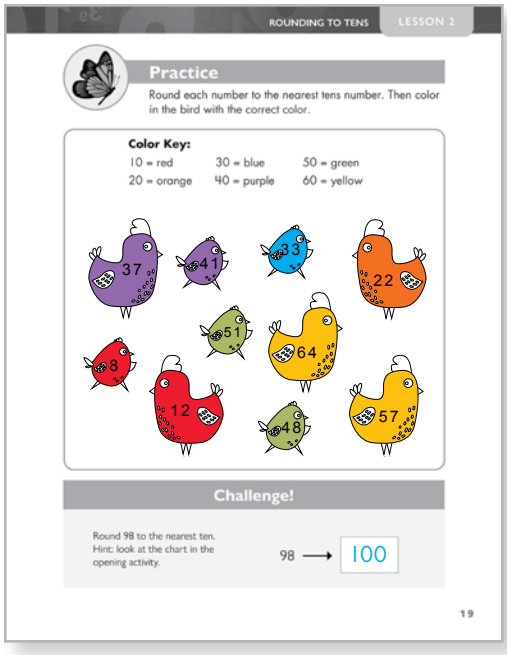
Page 16 Answers



LESSON 2

Rounding is a skill students need when learning estimation. They will also use it in the chapter on measurement. Uno cards work well for the opening activity, or you can make your own.

Page 19 Answers



ROUNDING TO TENS LESSON 2

Practice

Round each number to the nearest tens number. Then color in the bird with the correct color.

Color Key:

10 = red 30 = blue 50 = green
20 = orange 40 = purple 60 = yellow

37 41 33 22 51 64 8 12 48 57

Challenge!

Round 98 to the nearest ten.
Hint: look at the chart in the opening activity.

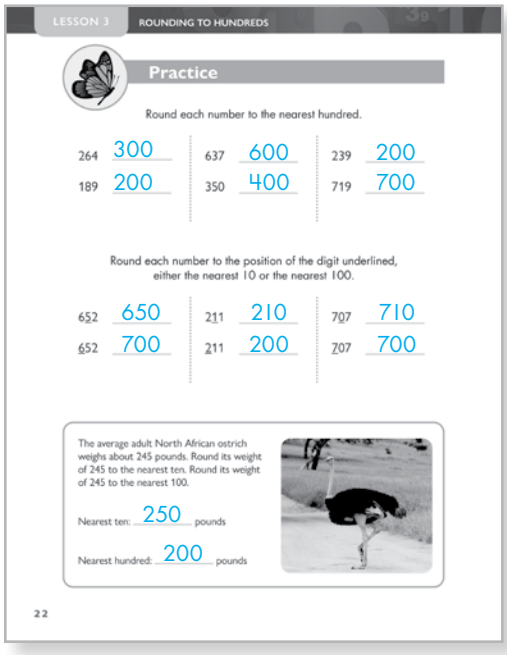
98 → 100

19

LESSON 3

The opening activity can easily be adapted to two players. In that version, players take turns rolling and whoever gets five spaces in a row first wins. They should use two different colors to color in the spaces.

Page 22 Answers



LESSON 3 ROUNDING TO HUNDREDS

Practice

Round each number to the nearest hundred.

264 300 637 600 239 200
189 200 350 400 719 700

Round each number to the position of the digit underlined, either the nearest 10 or the nearest 100.

652 650 211 210 707 710
652 700 211 200 707 700

The average adult North African ostrich weighs about 245 pounds. Round its weight of 245 to the nearest ten. Round its weight of 245 to the nearest 100.

Nearest ten: 250 pounds

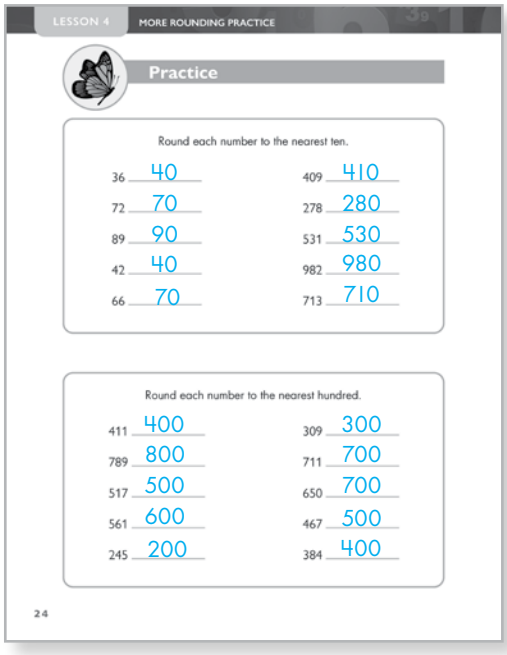
Nearest hundred: 200 pounds

22

LESSON 4

Nothing new is introduced in this lesson. This extra day of practice just reinforces the skill. Keep the Round Up or Round Down activity in a sheet protector if you'd like to use it again in the future to review.

Page 24 Answers



LESSON 4 MORE ROUNDING PRACTICE

Practice

Round each number to the nearest ten.

36	40	409	410
72	70	278	280
89	90	531	530
42	40	982	980
66	70	713	710

Round each number to the nearest hundred.

411	400	309	300
789	800	711	700
517	500	650	700
561	600	467	500
245	200	384	400

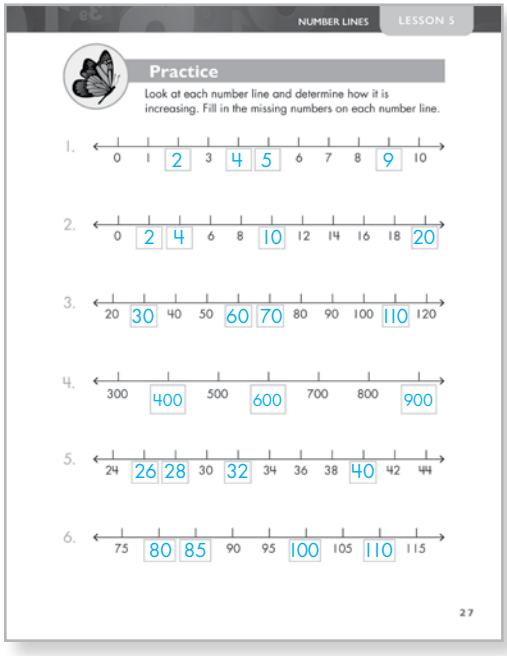
24

LESSON 5

For an additional challenge in the opening activity, students can choose to play any 5 spaces touching in the same color. This added challenge teaches the students to use strategy to block an opponent's attempts to get 5 squares touching while attempting to win with their color.

Number lines are a wonderful tool in helping us visualize and grasp math. They can be used with addition, subtraction, multiplication, and comparing numbers. It is important that students grasp what number lines are before they try to use them. This lesson is to refresh their memory and give them some practice before we move on to comparing numbers in the next lesson.

Page 27 Answers



NUMBER LINES LESSON 5

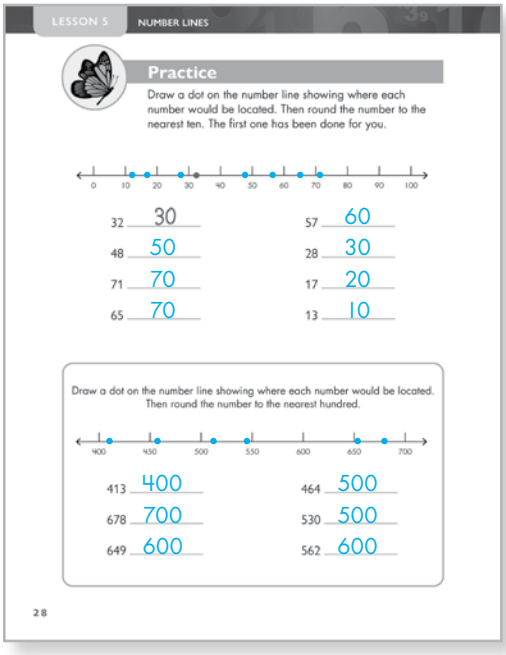
Practice

Look at each number line and determine how it is increasing. Fill in the missing numbers on each number line.

1. 0 1 **2** 3 **4** **5** 6 7 8 **9** 10
2. 0 **2** **4** 6 8 **10** 12 14 16 18 **20**
3. 20 **30** 40 50 **60** **70** 80 90 100 **110** 120
4. 300 **400** 500 **600** 700 800 **900**
5. 24 **26** **28** 30 **32** 34 36 38 **40** 42 44
6. 75 **80** **85** 90 95 **100** 105 **110** 115

27

Page 28 Answers

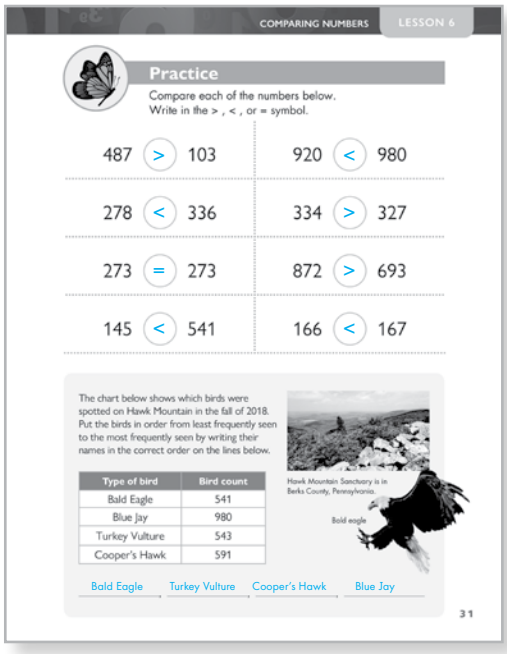


LESSON 6

If your child is having trouble with the problems in this lesson, have them go through and circle the greater number first. Then they can go back through and write the correct inequality sign. This extra measure is so you can tell if they are having trouble deciding which number is greater, or if they are just confused about the direction of the sign. Most students find the latter to be more difficult.

The alligator graphic on p. 29 in the student book is helpful for many students. Remind them that the alligator eats the greater number.

Page 31 Answers

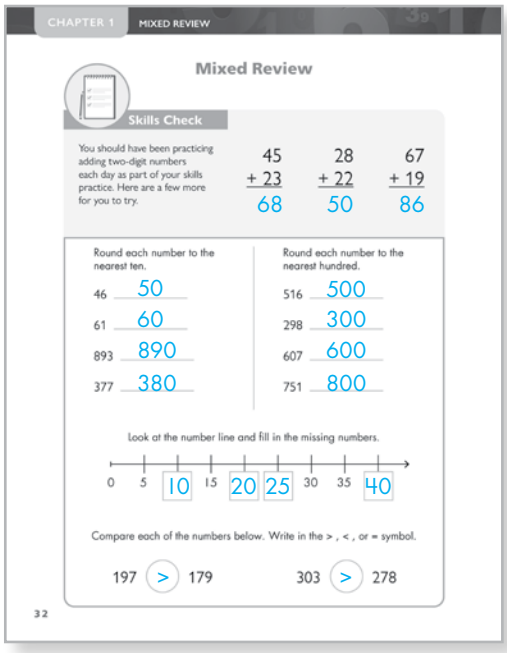


CHAPTER 1 REVIEW

The material in 3rd grade math is broader than what was covered in the earlier levels, so a review is included at the end of each chapter. The skills check at the top of the page is a quick check on the main materials covered in the skills practice for that chapter. If your child struggles, you may want to take a day to review the concept with extra practice or reinforce that skill gradually over the next few weeks.

Each student will need different levels of review. Because of this, we have also posted numerous additional resources on the Book Extras website that you can use for additional practice. Keep in mind, we have done our absolute best to include the materials we think your child will need. But no one knows your child's specific needs better than you.

Page 32 Answers



CHAPTER 1 MIXED REVIEW

Mixed Review

Skills Check

You should have been practicing adding two-digit numbers each day as part of your skills practice. Here are a few more for you to try.

45	28	67
+ 23	+ 22	+ 19
68	50	86

Round each number to the nearest ten.

46 50
61 60
893 890
377 380

Round each number to the nearest hundred.

516 500
298 300
607 600
751 800

Look at the number line and fill in the missing numbers.

0 5 10 15 20 25 30 35 40

Compare each of the numbers below. Write in the >, <, or = symbol.

197 > 179 303 > 278

32

CHAPTER 2: ADDING AND SUBTRACTING WITHIN 1000

LESSON 7

Some examples of rounding and estimating could include keeping track of how much you are spending at the grocery store, calculating how much something will cost after you use a coupon, or measuring ingredients when cooking a recipe that doesn't need to be exact.

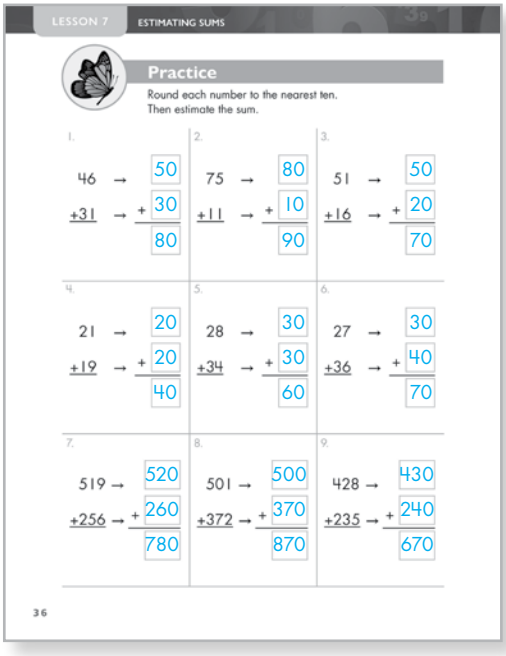
The third example in the lesson is included because rounding to the nearest hundred can sometimes produce an estimate that is very far off from the exact answer. For instance:

551 + 253

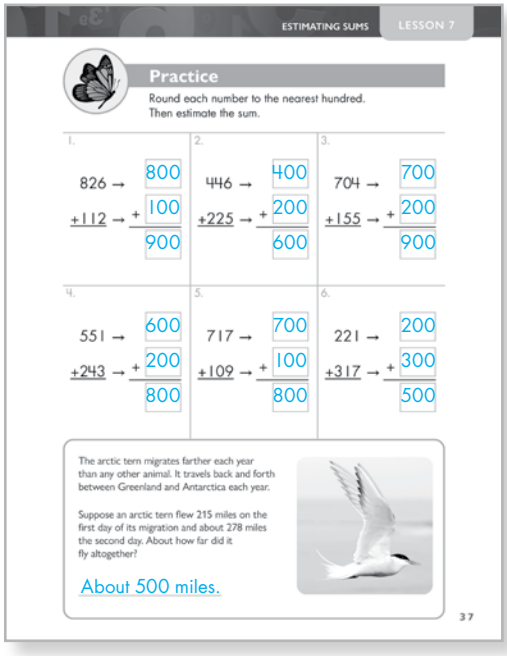
In this case both numbers would round up and you'd get an estimate of 900 when the exact answer is only 804. Rounding to the nearest ten in that example produces a much better estimate.

Students can round to the nearest hundred or the nearest ten to answer the word problem at the end of the lesson.

Page 36 Answers



Page 37 Answers

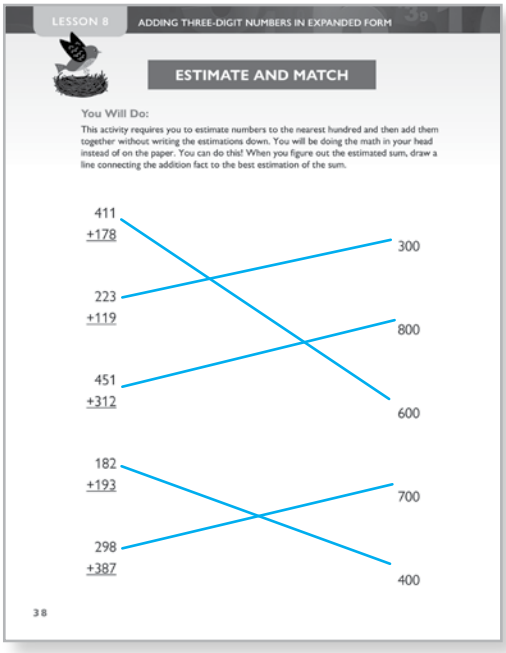


LESSON 8

Students should try to do the opening activity mentally if they can. That is why the answers are provided so they can match them. But if they get stuck, they can write the rounded numbers down.

Adding 3-digit numbers in expanded form is covered in more detail in 2nd grade. This lesson is intended only as a review. If your child needs more practice, there are additional worksheets on the Book Extras website.

Page 38 Answers


LESSON 8 ADDING THREE-DIGIT NUMBERS IN EXPANDED FORM

ESTIMATE AND MATCH

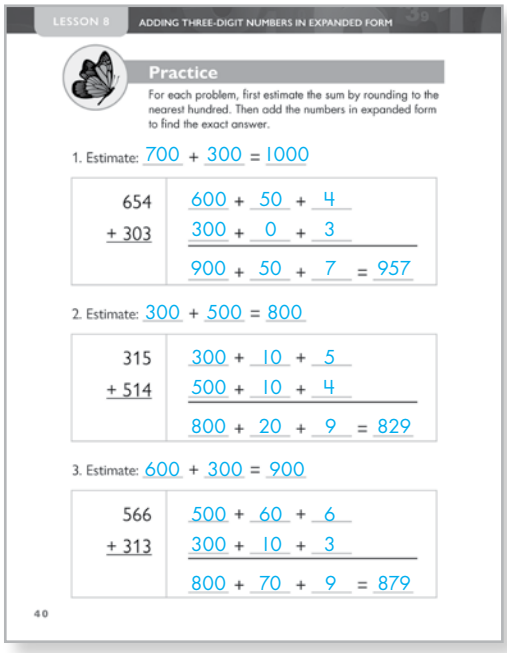
You Will Do:

This activity requires you to estimate numbers to the nearest hundred and then add them together without writing the estimations down. You will be doing the math in your head instead of on the paper. You can do this! When you figure out the estimated sum, draw a line connecting the addition fact to the best estimation of the sum.

411 +178 — 600
223 +119 — 300
451 +312 — 800
182 +193 — 400
298 +387 — 700

38

Page 40 Answers


LESSON 8 ADDING THREE-DIGIT NUMBERS IN EXPANDED FORM

Practice

For each problem, first estimate the sum by rounding to the nearest hundred. Then add the numbers in expanded form to find the exact answer.

1. Estimate: 700 + 300 = 1000

654 + 303	600 + 50 + 4 300 + 0 + 3 900 + 50 + 7 = 957

2. Estimate: 300 + 500 = 800

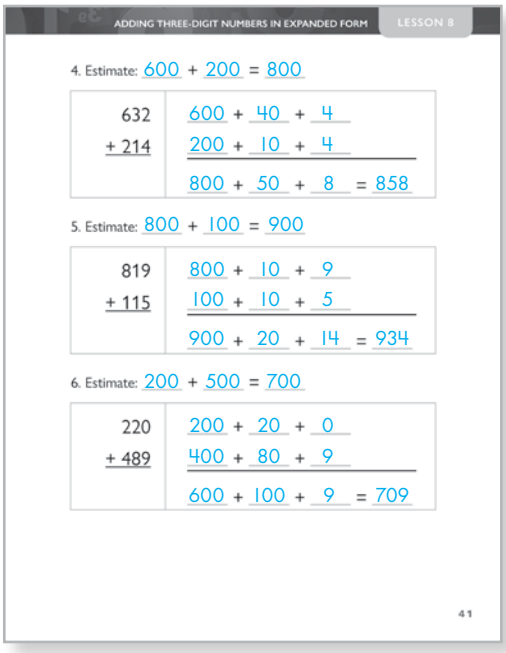
315 + 514	300 + 10 + 5 500 + 10 + 4 800 + 20 + 9 = 829

3. Estimate: 600 + 300 = 900

566 + 313	500 + 60 + 6 300 + 10 + 3 800 + 70 + 9 = 879

40

Page 41 Answers


ADDING THREE-DIGIT NUMBERS IN EXPANDED FORM LESSON 8

4. Estimate: 600 + 200 = 800

632 + 214	600 + 40 + 4 200 + 10 + 4 800 + 50 + 8 = 858

5. Estimate: 800 + 100 = 900

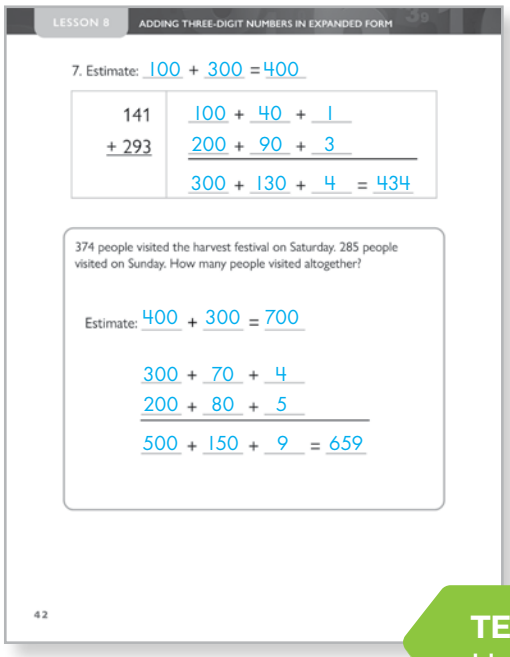
819 + 115	800 + 10 + 9 100 + 10 + 5 900 + 20 + 14 = 934

6. Estimate: 200 + 500 = 700

220 + 489	200 + 20 + 0 400 + 80 + 9 600 + 100 + 9 = 709

41

Page 42 Answers


LESSON 8 ADDING THREE-DIGIT NUMBERS IN EXPANDED FORM

7. Estimate: 100 + 300 = 400

141 + 293	100 + 40 + 1 200 + 90 + 3 300 + 130 + 4 = 434

374 people visited the harvest festival on Saturday. 285 people visited on Sunday. How many people visited altogether?

Estimate: 400 + 300 = 700

300 + 70 + 4
200 + 80 + 5
500 + 150 + 9 = 659

42

LESSON 9

This lesson reviews adding in the vertical format when you only need to regroup once. The next lesson will include problems where they need to regroup twice. In some of the the practice problems, the exact answer will vary from the estimate. For instance, in problem 3 most students will estimate the answer to be 900, but the exact answer of 836 is closer to 800. They can round to the nearest ten to avoid this, or you may just want to show them that it can happen especially when you round both numbers up or both numbers down.

Page 44 Answers

LESSON 9 ADDING THREE-DIGIT NUMBERS IN THE VERTICAL FORMAT (PART ONE)

Example: 195 + 362

Estimate: 200 + 400 = 600

Step One: Add up the ones.	Step Two: Add up the tens. Regroup if necessary.	Step Three: And now add the hundreds column.
1 9 5 + 3 6 2 7	1 1 9 5 + 3 6 2 5 7	1 1 9 5 + 3 6 2 5 5 7

Finally, compare your answer to your estimate.
557 is close to 600.

Practice

For each problem, first estimate the sum in your head and write it down. Then add the numbers in the vertical format to find the exact answer.

1. 1000 Estimate

8 1 1		
+ 1 9 5		
10 0 6		

2. 800 Estimate

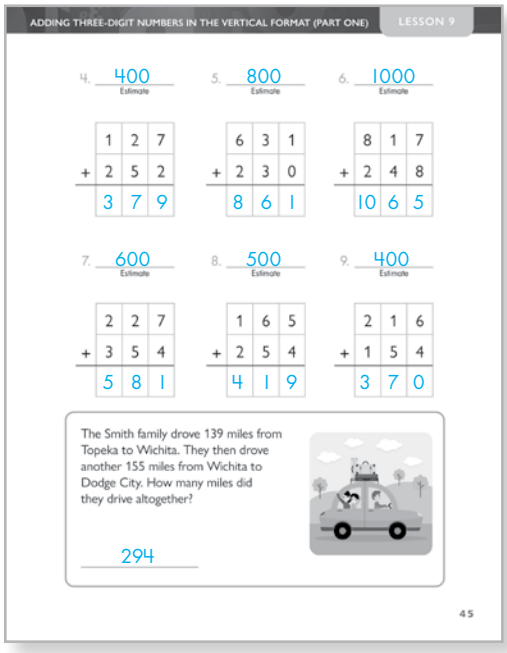
	4 1 9	
	+ 3 8 5	
	8 0 4	

3. 900 Estimate

		4 7 0
		+ 3 6 6
		8 3 6

44

Page 45 Answers



ADDING THREE-DIGIT NUMBERS IN THE VERTICAL FORMAT (PART ONE) LESSON 9

4. 400 Estimate

1 2 7		
+ 2 5 2		
3 7 9		

5. 800 Estimate

	6 3 1	
	+ 2 3 0	
	8 6 1	

6. 1000 Estimate

		8 1 7
		+ 2 4 8
		10 6 5

7. 600 Estimate

2 2 7		
+ 3 5 4		
5 8 1		

8. 500 Estimate

	1 6 5	
	+ 2 5 4	
	4 1 9	

9. 400 Estimate

		2 1 6
		+ 1 5 4
		3 7 0

The Smith family drove 139 miles from Topeka to Wichita. They then drove another 155 miles from Wichita to Dodge City. How many miles did they drive altogether?

294

45

LESSON 10

The opening activity is even more fun with two or more players. Whoever reaches 1000 first wins.

If you feel your child needs more practice with vertical addition, there are extra practice pages on the Book Extras website.

Page 48 Answers

LESSON 10 ADDING THREE-DIGIT NUMBERS IN THE VERTICAL FORMAT (PART TWO)

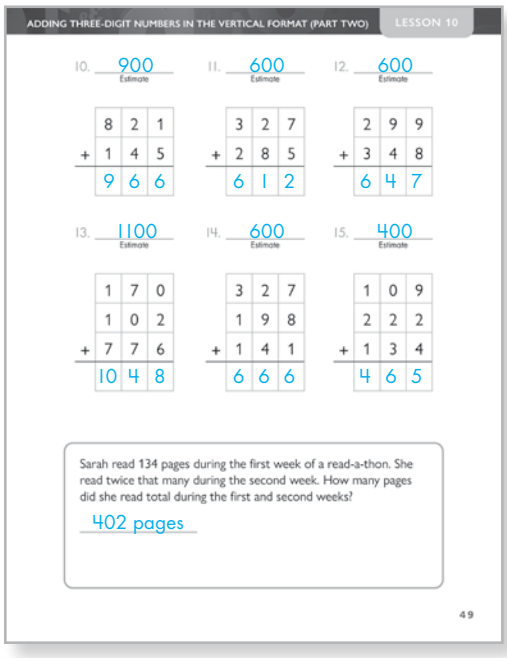
Practice

For each problem, first estimate the sum. Then add the numbers in the vertical format to find the exact answer.

1. Estimate: 700
   371 + 295 = 666
2. Estimate: 800
   499 + 265 = 764
3. Estimate: 700
   401 + 279 = 680
4. Estimate: 800
   390 + 414 = 804
5. Estimate: 700
   526 + 175 = 701
6. Estimate: 900
   342 + 578 = 920
7. Estimate: 500
   412 + 129 = 541
8. Estimate: 600
   203 + 399 = 602
9. Estimate: 500
   177 + 286 = 463

48

Page 49 Answers



ADDING THREE-DIGIT NUMBERS IN THE VERTICAL FORMAT (PART TWO) LESSON 10

10. Estimate: 900
    821 + 145 = 966
11. Estimate: 600
    327 + 285 = 612
12. Estimate: 600
    299 + 348 = 647
13. Estimate: 1100
    170 + 102 + 776 = 1048
14. Estimate: 600
    327 + 198 + 141 = 666
15. Estimate: 400
    109 + 222 + 134 = 465

Sarah read 134 pages during the first week of a read-a-thon. She read twice that many during the second week. How many pages did she read total during the first and second weeks?

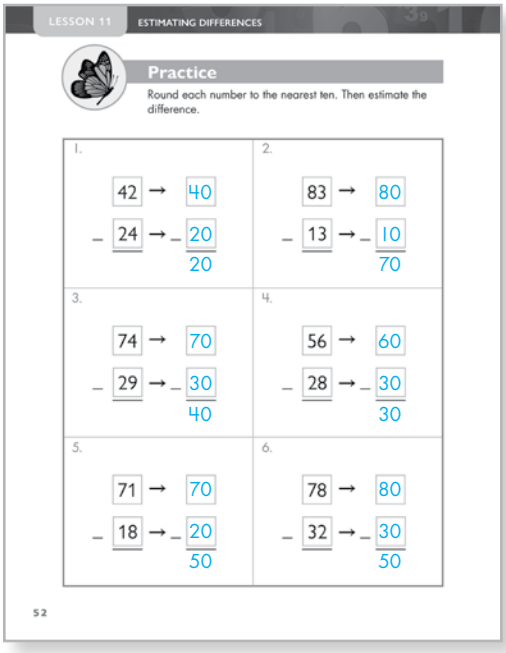
402 pages

49

LESSON 11

Plotting numbers on a number line helps students visualize how close each number is to the nearest ten. This will help them when they round later in this lesson.

Page 52 Answers



LESSON 11 ESTIMATING DIFFERENCES

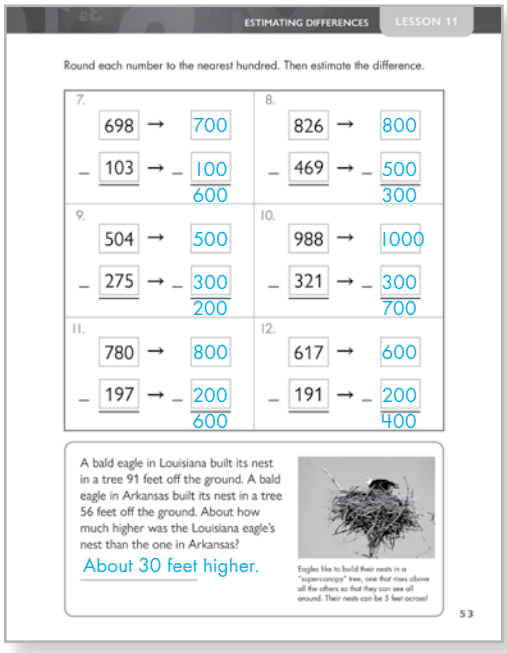
Practice

Round each number to the nearest ten. Then estimate the difference.

1. 42 → 40 − 24 → − 20 20	2. 83 → 80 − 13 → − 10 70
3. 74 → 70 − 29 → − 30 40	4. 56 → 60 − 28 → − 30 30
5. 71 → 70 − 18 → − 20 50	6. 78 → 80 − 32 → − 30 50

52

Page 53 Answers



ESTIMATING DIFFERENCES LESSON 11

Round each number to the nearest hundred. Then estimate the difference.

7. 698 → 700 − 103 → − 100 600	8. 826 → 800 − 469 → − 500 300
9. 504 → 500 − 275 → − 300 200	10. 988 → 1000 − 321 → − 300 700
11. 780 → 800 − 197 → − 200 600	12. 617 → 600 − 191 → − 200 400

A bald eagle in Louisiana built its nest in a tree 91 feet off the ground. A bald eagle in Arkansas built its nest in a tree 56 feet off the ground. About how much higher was the Louisiana eagle's nest than the one in Arkansas?

About 30 feet higher.

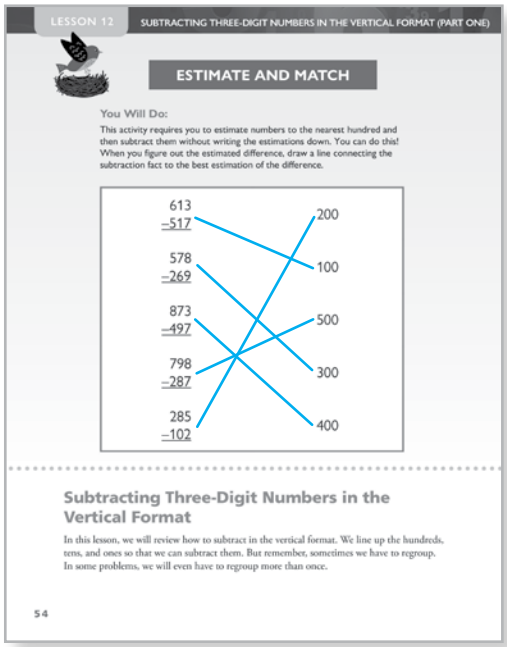
Eagles like to build their nests in a "super-canopy" tree, one that rises above all the others so that they can see all around. Their nests can be 5 feet across!

53

LESSON 12

Regrouping when subtracting was developed in detail in *Exploring Creation with Mathematics, Level 2*. If your child is struggling, have them act out the problems with base ten blocks first. They will continue to practice this skill in the unit two skills practice.

Page 54 Answers



LESSON 12 SUBTRACTING THREE-DIGIT NUMBERS IN THE VERTICAL FORMAT (PART ONE)

ESTIMATE AND MATCH

You Will Do:

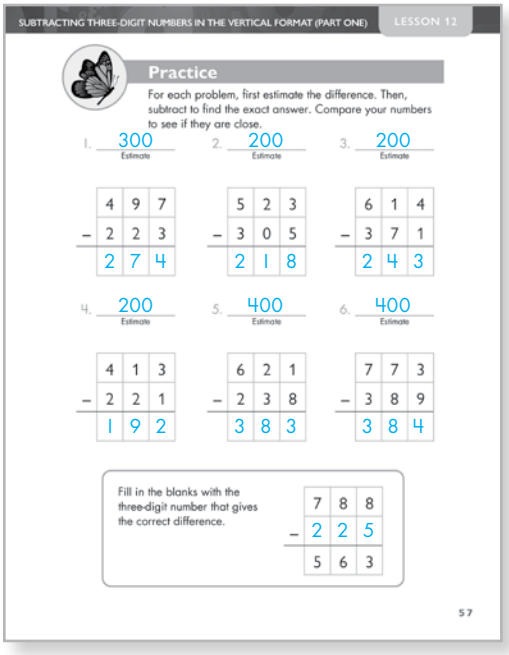
This activity requires you to estimate numbers to the nearest hundred and then subtract them without writing the estimations down. You can do this! When you figure out the estimated difference, draw a line connecting the subtraction fact to the best estimation of the difference.

Subtracting Three-Digit Numbers in the Vertical Format

In this lesson, we will review how to subtract in the vertical format. We line up the hundreds, tens, and ones so that we can subtract them. But remember, sometimes we have to regroup. In some problems, we will even have to regroup more than once.

54

Page 57 Answers



SUBTRACTING THREE-DIGIT NUMBERS IN THE VERTICAL FORMAT (PART ONE) LESSON 12

Practice

For each problem, first estimate the difference. Then, subtract to find the exact answer. Compare your numbers to see if they are close.

1. Estimate: 300

4	9	7
− 2	2	3
2	7	4

2. Estimate: 200

5	2	3
− 3	0	5
2	1	8

3. Estimate: 200

6	1	4
− 3	7	1
2	4	3

4. Estimate: 200

4	1	3
− 2	2	1
1	9	2

5. Estimate: 400

6	2	1
− 2	3	8
3	8	3

6. Estimate: 400

7	7	3
− 3	8	9
3	8	4

Fill in the blanks with the three-digit number that gives the correct difference.

7	8	8
− 2	2	5
5	6	3

57

LESSON 13

Subtracting across zeroes can be tricky, which is why we have included this second lesson on subtracting in the vertical format. The practice for the lesson is a mix of problems that have zeroes and those that don't.

Page 58 Answers

LESSON 13 SUBTRACTING THREE-DIGIT NUMBERS IN THE VERTICAL FORMAT (PART TWO)

SUBTRACTING WITH BASE TEN BLOCKS

You Will Need:
- ☐ Base ten blocks

You Will Do:
1. Act out the subtraction problem below with your base ten blocks.

400 − 187= 213

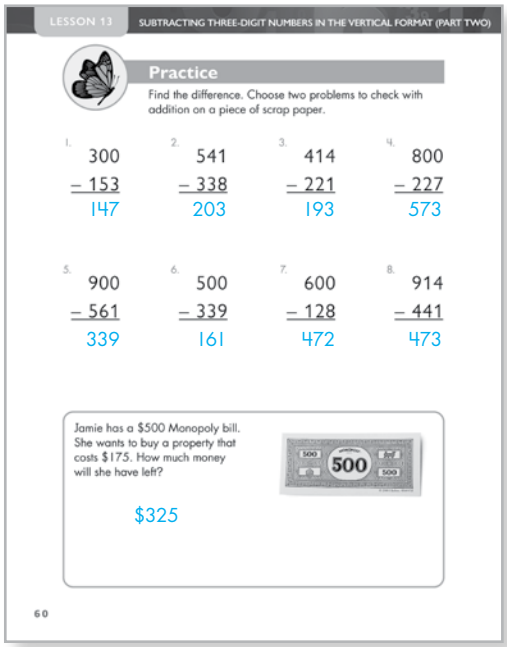
2. First, use four flats to model 400.
3. To take away 187 you will need to break one of the flats into ten rods. You will then need to break one of the rods into ten ones.
4. Write the answer in the space provided.

Subtracting Across Zeroes

When a number has zero tens like in the opening activity, you'll have to regroup before subtracting. Just remember that 100 is the same as 9 tens and 10 ones. Look at this example of the problem from the opening activity.

58

Page 60 Answers



LESSON 13 SUBTRACTING THREE-DIGIT NUMBERS IN THE VERTICAL FORMAT (PART TWO)

Practice

Find the difference. Choose two problems to check with addition on a piece of scrap paper.

1.	2.	3.	4.
300	541	414	800
− 153	− 338	− 221	− 227
147	203	193	573
5.	**6.**	**7.**	**8.**
900	500	600	914
− 561	− 339	− 128	− 441
339	161	472	473

Jamie has a $500 Monopoly bill. She wants to buy a property that costs $175. How much money will she have left?

$325

60

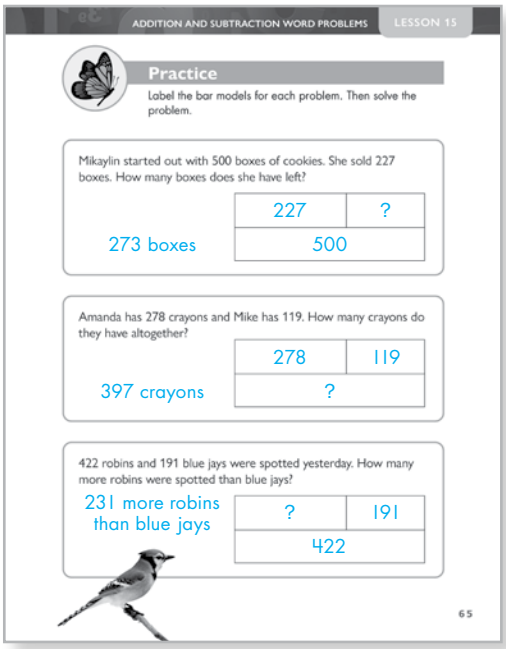
LESSON 14

This lesson is just the Win the Nest game. It is an opportunity for them to get more practice while having some fun. Otherwise, three-digit subtraction can quickly become tedious.

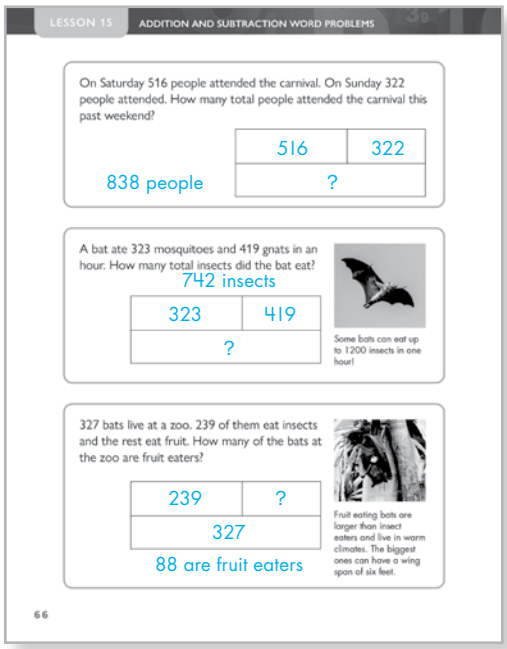
LESSON 15

Bats have fascinated me since I was a kid, but I realize not everyone feels that way. I feel I may need to offer an apology for putting bats and word problems in the same lesson.

Page 65 Answers



Page 66 Answers



LESSON 16

The opening activity helps students see the two-step process acted out.

Because the difficulty of the word problems is higher in this lesson, you will notice that the numbers are easier to work with. Students are told that they can draw a bar model if they find that helpful. Because there are two steps, some students might find the bar model confusing, so using it isn't required.

Page 69 Answers

TWO-STEP WORD PROBLEMS LESSON 16

Practice

Solve each of the problems below. You may want to draw a bar model.

1. There are 89 pages in the book I am reading. I read 22 pages yesterday and 37 pages today. How many pages do I have left to read?

22 + 37 = 59
89 - 59 = 30
30 pages left

2. 720 people went to the football game. 400 of them were adults and the rest were children. How many more adults went to the football game than children?

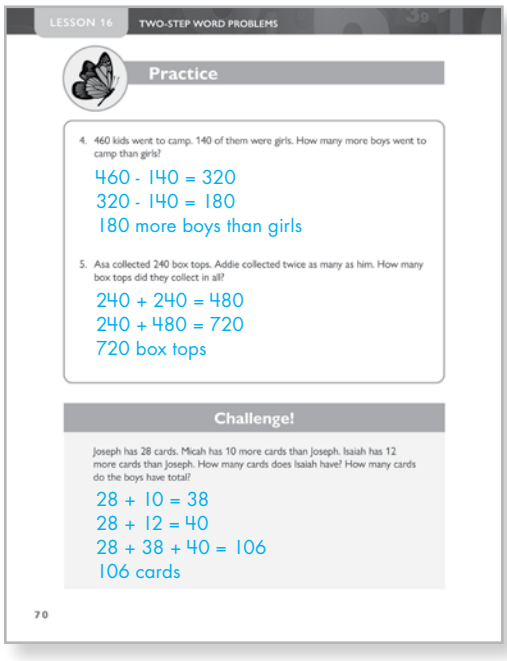
720 - 400 = 320
400 - 320 = 80
80 more adults

3. Sarah has $330. Her sister Maggie has $40 less than her. How much money do they have altogether?

330 - 40 = 290
330 + 290 =620
$620 altogether

69

Page 70 Answers



LESSON 16 TWO-STEP WORD PROBLEMS

Practice

4. 460 kids went to camp. 140 of them were girls. How many more boys went to camp than girls?

460 - 140 = 320
320 - 140 = 180
180 more boys than girls

5. Asa collected 240 box tops. Addie collected twice as many as him. How many box tops did they collect in all?

240 + 240 = 480
240 + 480 = 720
720 box tops

Challenge!

Joseph has 28 cards. Micah has 10 more cards than Joseph. Isaiah has 12 more cards than Joseph. How many cards does Isaiah have? How many cards do the boys have total?

28 + 10 = 38
28 + 12 = 40
28 + 38 + 40 = 106
106 cards

70

COMPLETE SUPPLY LIST

- Base ten blocks
- Linking cubes
- Pattern blocks
- Fraction Tiles
- Multiplication flashcards with facts up to 10 x 10
- Division flashcards up to 100 ÷ 10
- Notecards
- Numbered cards such as Uno® cards
- Paperclips
- Dice
- Small objects (such as pennies, beans, etc.)
- Colored pencils
- Scissors
- Glue
- 80 Beads that are several different colors
- String
- Playdough
- Envelopes
- 2 manila folders
- M&M's (or another small candy or counter)
- Action figures, dolls, or stuffed animals
- Cupcake liners, ice cube tray, rubber bands or an egg carton to sort groups of counters
- A deck of cards
- Glue stick
- A timer
- Two blank posters boards
- Markers
- A ruler (inches and centimeters)
- A bag
- A bouncy ball
- A tape measure
- Masking tape
- A doorway
- Phone
- Scissors
- Brass fastener
- 1 liter liquid measuring cup
- Different liquid containers
- A tray
- 16 plastic cups
- A gallon container, a quart, and a pint
- Tape
- Two plastic cups
- A hanger
- A bird feeder (instructions to make your own are on page 72)
- Bird seed
- Notebook paper
- Dot stickers
- Analog clock
- A highlighter
- Stapler
- Markers
- Scratch paper
- Multiplication fact songs (many are available online)
- Dry measuring cups (1/4, 1/3, 1/2, and 1 cup)
- Water, flour or rice
- 4 Chenille stems/pipe cleaners
- 2 Graham crackers
- 2 oranges
- A pizza box
- Construction paper