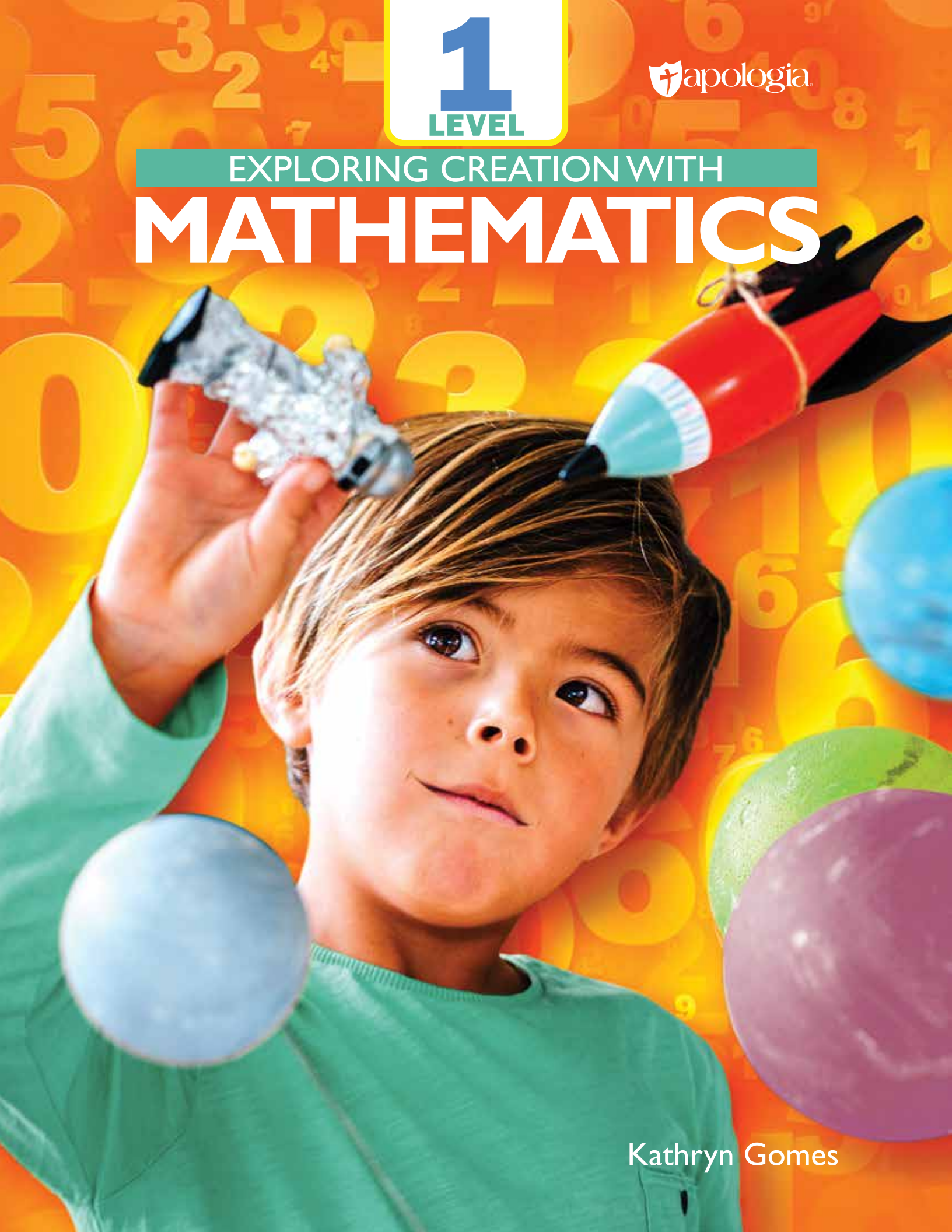
1
LEVEL

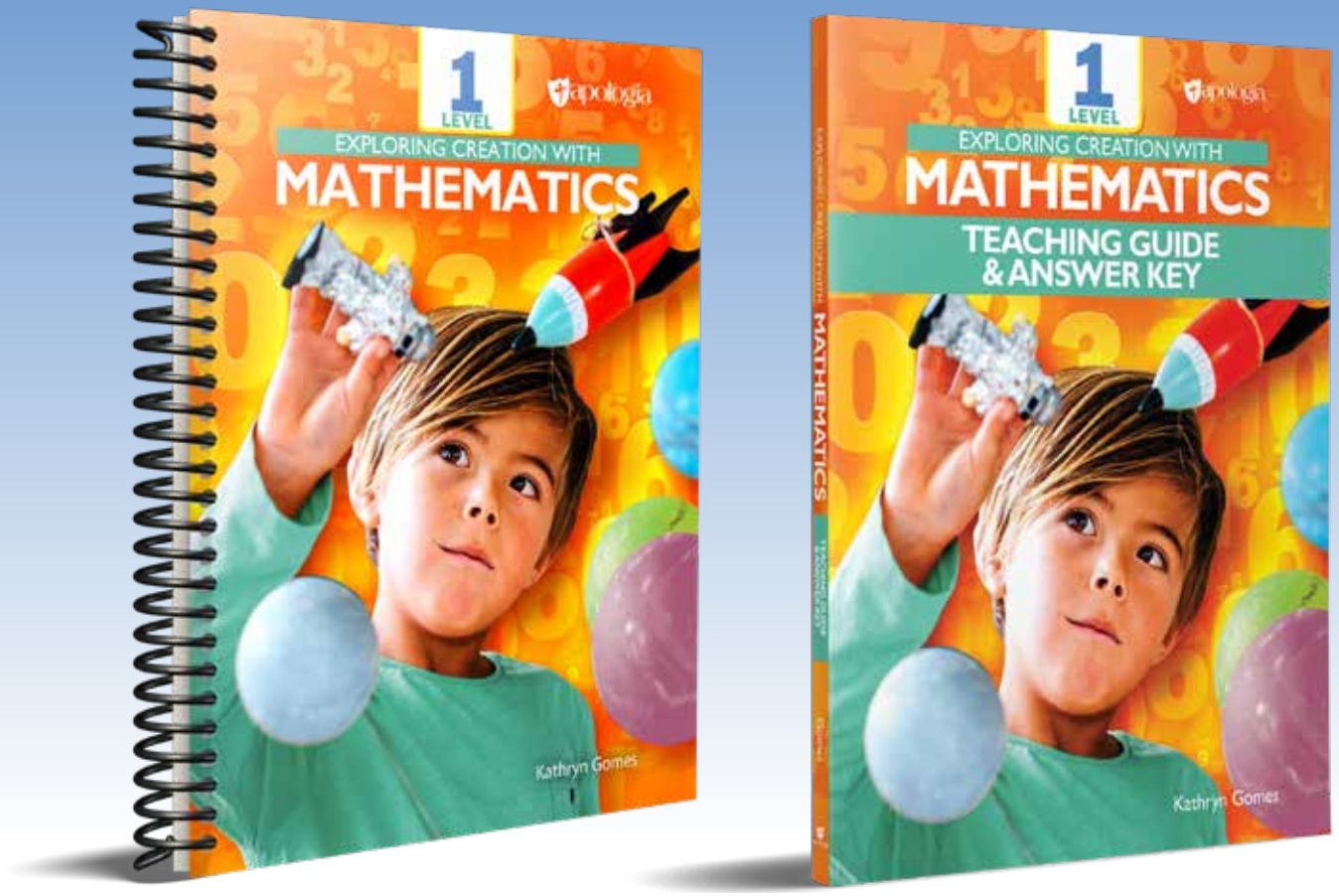
apologia

EXPLORING CREATION WITH

MATHEMATICS



Kathryn Gomes



Click the section you want to preview.

TEXTBOOK

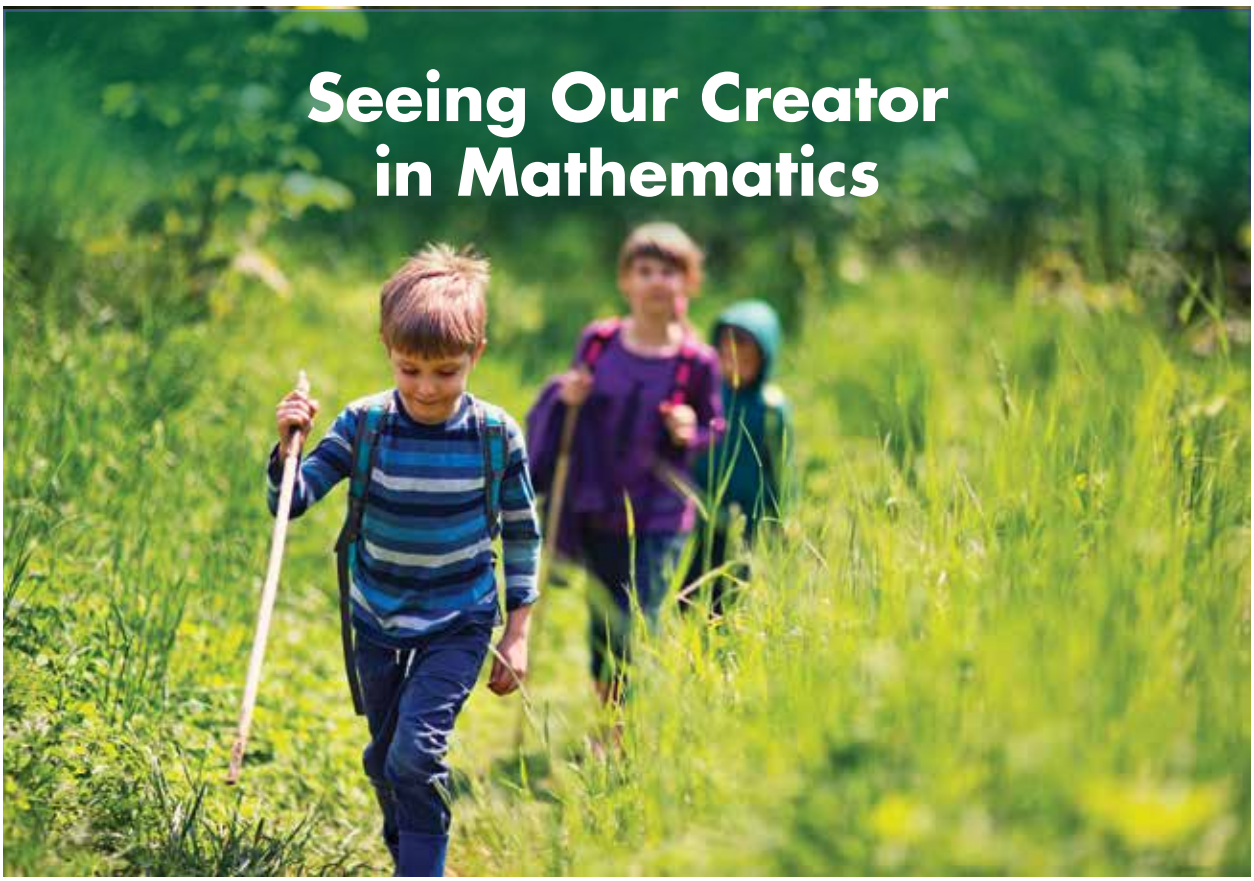
TEACHING GUIDE AND ANSWER KEY

apologia

TABLE OF CONTENTS

UNIT 1

INTRODUCTION TO ADDITION



Welcome to *Exploring Creation with Mathematics, Level 1*! You are about to start out on a fun and exciting journey. This book is filled with activities, projects, and games that will teach you about numbers. You'll be learning to add, subtract, graph data, and explore shapes. As you complete each unit, you'll see how math is connected to science, business, art, and the world around you.

So, learning math is like going on a hike in a forest. This textbook will be your trail guide. And what an amazing journey you are taking! As you learn more about mathematics this year, you will also be learning more about God. When God created the whole world, He also created math. He made a mathematical world to show us His faithfulness, His beauty, and even His love for us. The most exciting thing about exploring creation with mathematics is that it teaches you more about our Creator.

If your life's journey leads you to become a mathematician, someone who studies math for a living, your journey will never stop amazing you. You will have an incredible understanding of creation along with one huge adventure to share! Even if you keep studying math until you grow up and have kids of your own, you still would have new things to learn. But God knows it all right now. He fully understands math because He created it. And He has promised to help you.

> And my God will supply all your needs according to His riches in glory in Christ Jesus.
>
> Philippians 4:19

The God who created the whole universe, including math, promises to be with you. He knows that you started this book today and that you are reading this page right now. Take a moment to pray and ask Him to join you on your journey. That's a prayer He loves to answer.

Skills Practice for Unit One:

Writing and ordering the numbers 0–20 (see answer key for more details).

0

1 2 3

4 5 6

7 8 9

10 11 12

13 14 15

16 17 18

19 20

CHAPTER

1

THE NUMBERS 1–10

1	2	3	4	5	6	7	8	9	10

In this chapter, you will review how to:

* Identify, write, and use the numbers 1–10.
* Match a numeral to the correct number of objects.
* Complete sequences and put the numbers 1–10 in order.

PIPE CLEANER NUMBERS

You will need:

- ☐ Eleven pipe cleaners
- ☐ Fifty-five beads

You Will Do:

1. String a pipe cleaner with 1 bead. String the next pipe cleaner with 2 beads and so on for nine pipe cleaners. For the numeral 10, string 5 beads on each of two pipe cleaners.
2. Bend the pipe cleaner into the shape of each one of the numbers below. For the number 10, place 5 beads on the one and 5 beads on the zero.

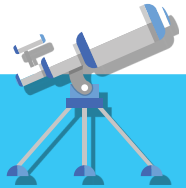
1 2 3 4 5 6 7 8 9 10

Writing the Numbers 1–10

The symbols we use to represent numbers—like the ones above—are called **numerals**.

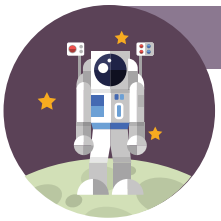
We also use word names to talk about numbers. For example, the numerals 1, 4 and 7 have the word names one, four, and seven.

We use numbers to talk about different amounts. Remember that each number matches with a certain amount. For example, look at the different ways to represent the number 4 below.



Numeral: the symbol we use to represent a number.

Representing a Number With a:		
Numeral	**Word Name**	**Group of Objects**
4	four	



Practice

Trace the numerals and then practice writing them on your own. Be sure to also notice the number of objects and word name that go with each number.

one

two

three

four

five

six

seven

eight

nine

ten

Identifying and Using the Numbers 1–10

In the last lesson, we practiced writing the numerals 1–10. In this lesson, we're going to match numerals to the correct amounts. To do this, we will use our counting skills.

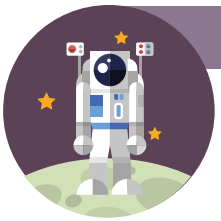
Look at the chart below and study the numerals, word names, and groups of objects. Review them with your parent. Then, fill in the answers to the questions below.

1 one		6 six	
2 two		7 seven	
3 three		8 eight	
4 four		9 nine	
5 five		10 ten	

_____ Which number is the same as your age?

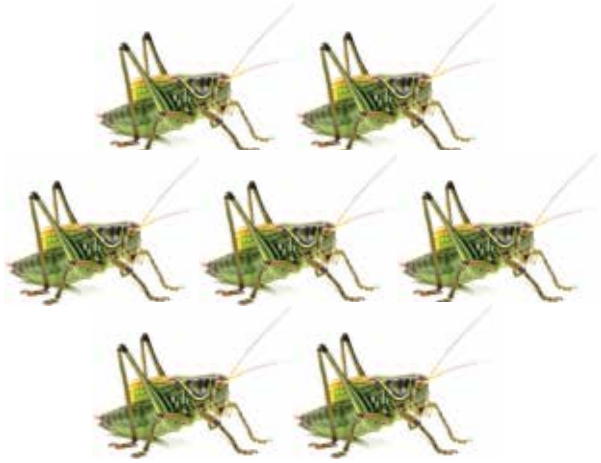
_____ Which number is the same as the amount of people in your family?

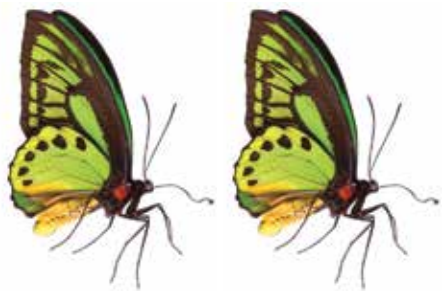
_____ Which number is your favorite and why?



Practice

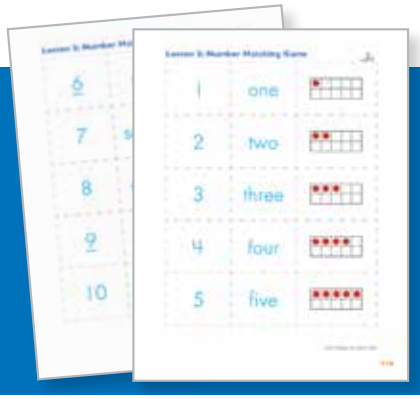
Write the correct numeral below each group of bugs.





Number Matching Game

Tear out the Lesson 2: Number Matching Game from the back of the answer key. Cut out each card. Mix them up. Practice matching the numeral, the word name, and the ten frames. Time yourself and see how fast you can do it.



LINE THEM UP!

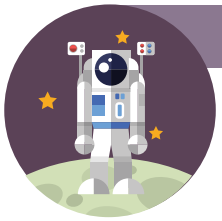
You will need:

- [ ] Ten mini cups
- [ ] A black marker
- [ ] Beans, Goldfish® crackers, or any other small object

You Will Do:

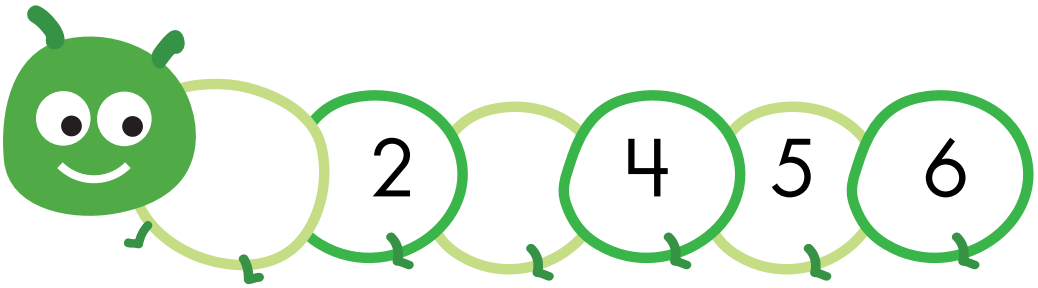
1. Ask an adult to label each cup with the numerals 1–10.
2. Fill each cup with the correct number of objects.
3. Scramble the cups and then line them up in order. Repeat until you can quickly do this without mistakes.
4. Practice unscrambling smaller groups of cups that don't start with one. For instance, your parent might have you practice with the numbers 4, 5, 6, 7, and 8.

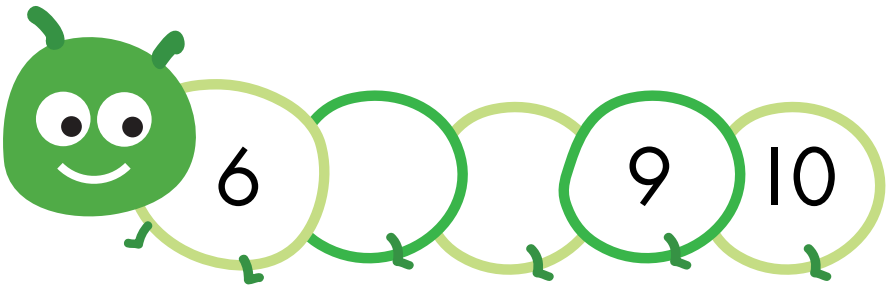
Putting Numbers in Order

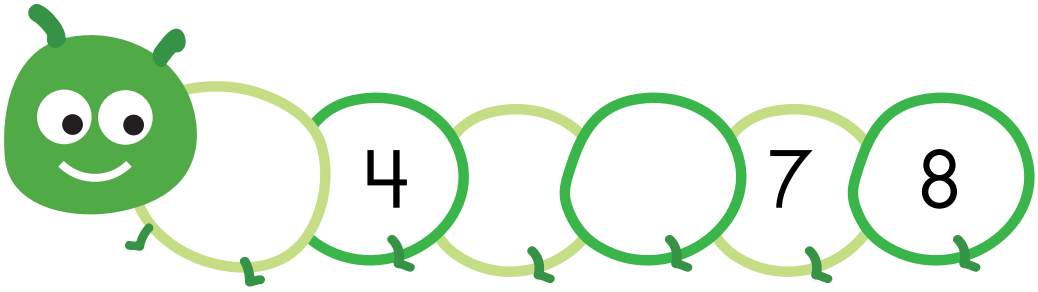


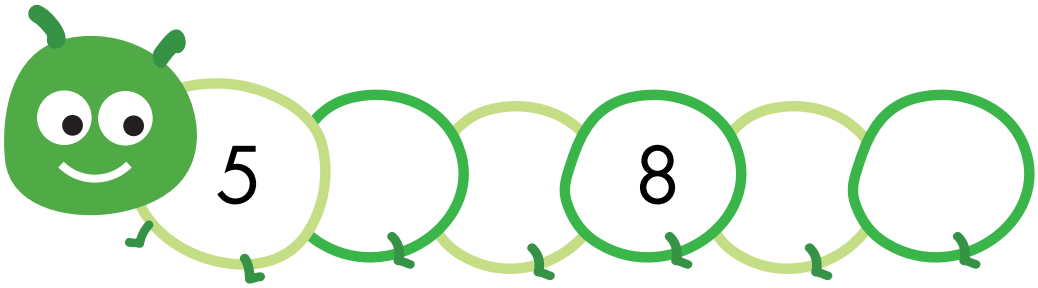
Practice

Fill in each caterpillar with the missing numerals.

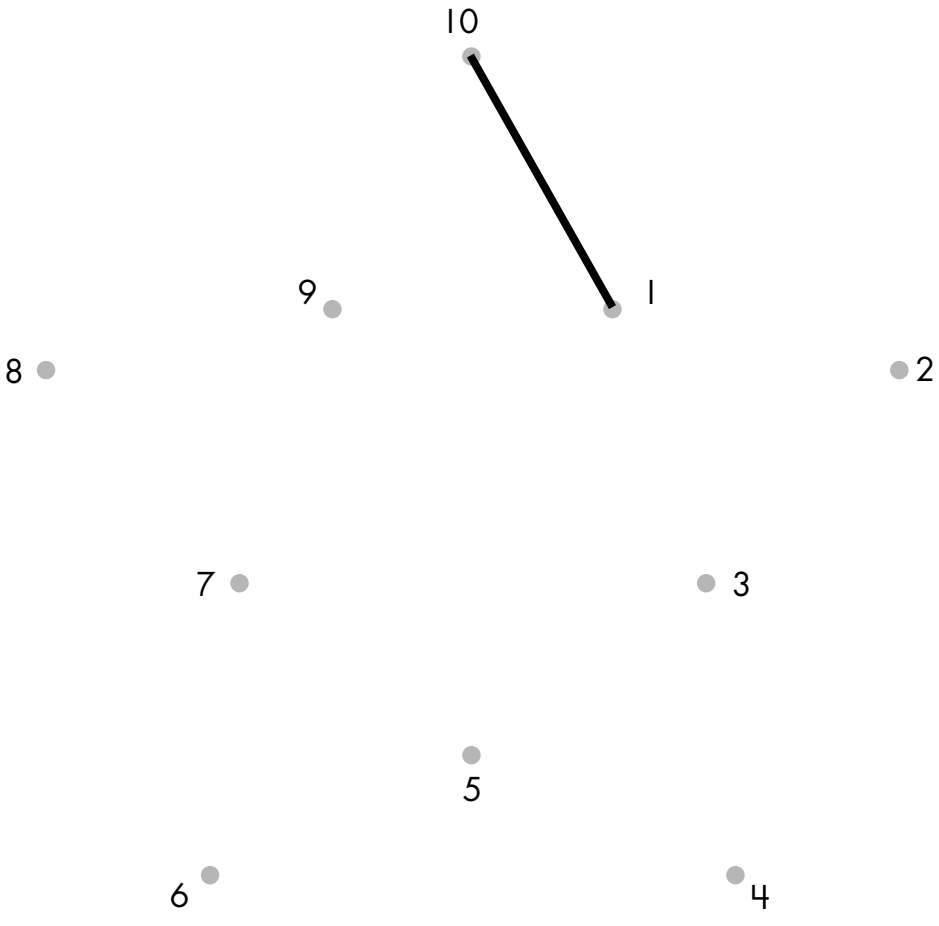






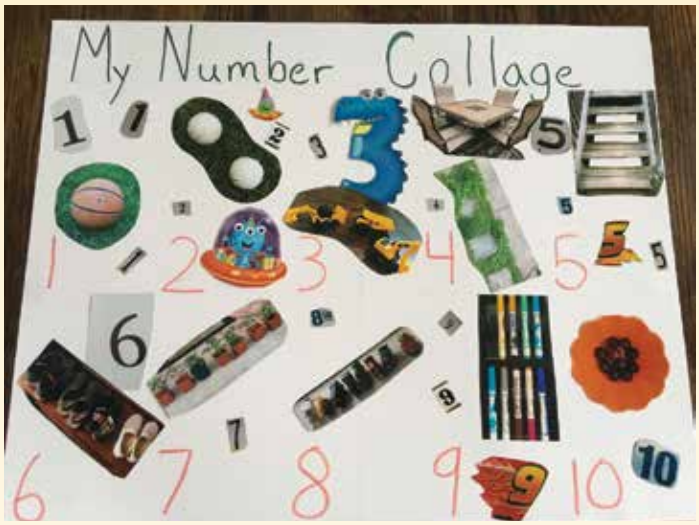


Starting with one, connect the dots in order.
Then color your picture.



NUMBER COLLAGE PROJECT

We are going to make a collage to show off your new knowledge of the numbers 1–10. A collage is made by mixing many pictures together.



You will need:

- [ ] Scissors
- [ ] Poster board
- [ ] Magazines or phone and printer access
- [ ] Ruler
- [ ] Markers
- [ ] Glue or tape

You will do:

STEP ONE:

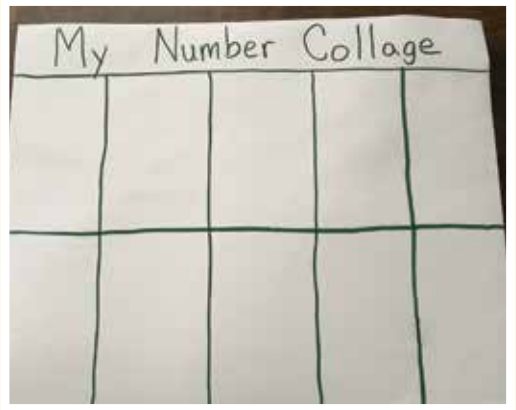
To start, you need to find examples of the numerals 1–10. Look in magazines or use a phone and take pictures of numerals around you. If you are having trouble, try going to a store or walking around your neighborhood. Numerals might pop up where you least expect to see them.

STEP TWO:

Now find groups of objects that match the numbers 1–10. It might be a picture of 5 cookies that you cut out of a grocery store ad. Or maybe you could take a picture of 3 toy construction vehicles. How many steps are there leading up to your deck? These are all examples of numbers.

STEP THREE:

Cut out or print all your pictures. Match the numerals with the pictures of objects. If you found a numeral or a group of objects representing a number more than once, that's great. Just put all your pictures for the same number together.



STEP FOUR:

Write the title "My Number Collage" on the top of your poster board. Divide the lower section into 2 rows. Now draw 4 vertical lines, making 10 sections.

STEP FIVE:

Use a marker to label each section with a numeral. You can have an adult sketch the numeral in pencil first so you can trace it.

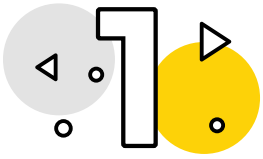
STEP SIX:

Glue or tape your pictures into the correct sections.

STEP SEVEN:

Share your collage with someone. Then hang it up in the room where you do your math.

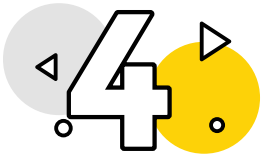
10 Rules to Live By



1. Love God more than anything else.

2. Make sure God is the most important part of your life.

3. Always use love and respect when you say God's name.



4. Keep the LORD's day special.

5. Love and respect your dad and mom.

6. Never hurt anyone.

7. Love the one you marry.

8. Don't take anything that isn't yours.

9. Always tell the truth.

10. Rejoice in what you have.

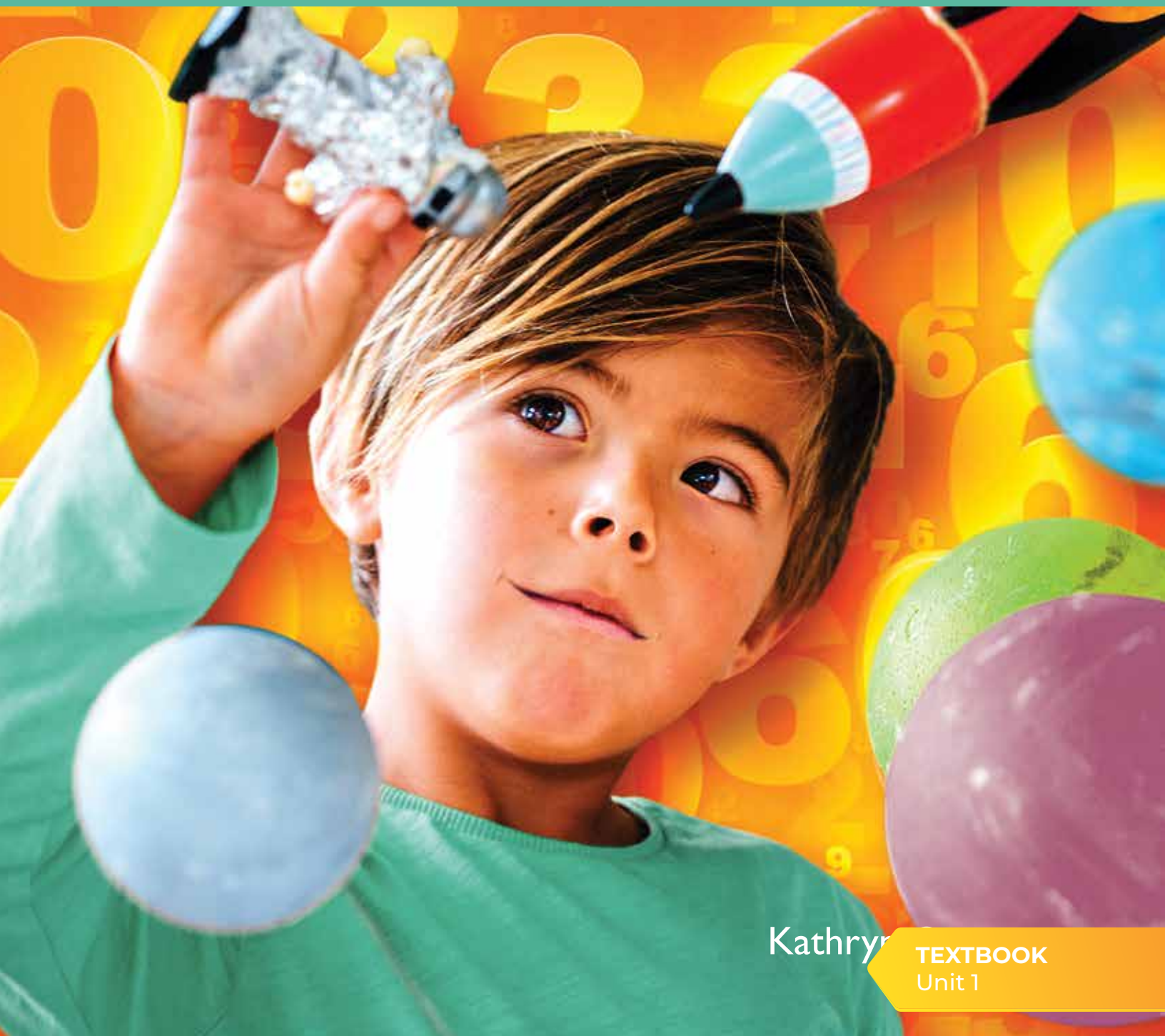
1 LEVEL

apologia

EXPLORING CREATION WITH

MATHEMATICS

TEACHING GUIDE & ANSWER KEY



Kathryn

TEXTBOOK
Unit 1

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 28 weeks, there is plenty of room for personal modifications.

WEEK	DAY 1	DAY 2	DAY 3	DAY 4
1	☐ UNIT 1 **Introductions** CHAPTER 1 **Lesson 1** Skills practice: write the numbers 1–10	☐ CHAPTER 1 **Lesson 2** Skills practice: write the numbers 1–10	☐ CHAPTER 1 **Lesson 3** Skills practice: write the numbers 1–10	☐ CHAPTER 1 **Lesson 4 Number Collage Project** Skills practice: write the numbers 1–10
2	☐ CHAPTER 1 **Lesson 4 Number Collage Project Day 2** Skills practice: order the numbers 1–10	☐ CHAPTER 2 **Lesson 5** Skills practice: order the numbers 1–10	☐ CHAPTER 2 **Lesson 6** Skills practice: order the numbers 1–10	☐ CHAPTER 2 **Lesson 7** Skills practice: order the numbers 1–10
3	☐ CHAPTER 3 **Lesson 8** Skills practice: order the numbers 0–20	☐ CHAPTER 3 **Lesson 9** Skills practice: order the numbers 0–20	☐ CHAPTER 3 **Lesson 10** Skills practice: order the numbers 0–20	☐ CHAPTER 3 **Lesson 11** Skills practice: order the numbers 0–20

TEACHER'S NOTES

UNIT 1: INTRODUCTION TO ADDITION

SUPPLY LIST

Skills Practice:

- LEGO® bricks
- Foam cups
- Marker
- Copywork pages printed from the Book Extras website

Chapter 1:

- Eleven pipe cleaners
- Fifty-five beads
- Ten mini cups
- Beans/Goldfish® crackers/small objects for counting
- Scissors
- One poster board
- Magazines OR phone and printer access
- Ruler or straightedge
- Glue or tape
- Crayons

Chapter 2:

- Linking cubes or LEGO bricks in at least two different colors
- A rubber ink stamp or stickers
- A dry erase or permanent marker
- Crayons

Chapter 3:

- Beans/Goldfish crackers/small objects for counting
- A pair of dice
- A set of dominoes
- Linking cubes
- Crayons

Chapter 4

- Blue and red linking cubes
- Thirty buttons or small candies
- Base ten blocks (unit cubes only)
- Uno® cards
- Crayons

Unit 1 reviews many concepts that are traditionally covered in kindergarten. This was intentional. Most kids benefit from some review after the summer break. It also gives students and parents some time to acclimate to the program before we jump into new material. Additionally, there is a focus on the relationship between numbers and math facts that isn't developed in every kindergarten program. You will find that your child's knowledge of the numbers 0–20 and basic addition is deepened in this unit.

The text was written assuming you will be sitting alongside of your child to help them. A first grader is not expected to be able to read and complete the student book on his or her own.

SKILLS PRACTICE FOR UNIT 1:

Writing and ordering the numbers 0–20

Skill One: Write the Numbers 1-10

By the end of this unit, students should be able to write the numbers clearly enough that it doesn't interfere with their learning. That said, writing some numbers backward is quite normal at this level. There is some copywork in the all-in-one student text but additional pages are also provided on the Book Extras website. Students should practice writing numbers on plain notebook paper in addition to the extra copywork pages provided on the Book Extras website.

Skill Two: Order the Numbers 0–20

By the end of this unit, students should be able to complete the sequence from zero to twenty, as well as parts of the sequence. A simple stacking game is one of the best ways to practice.

LEGO bricks option: stack the LEGO bricks on top of each other and number them using a dry erase or permanent marker (if you want it to last). It is easier to write the numbers if you stack the bricks first.

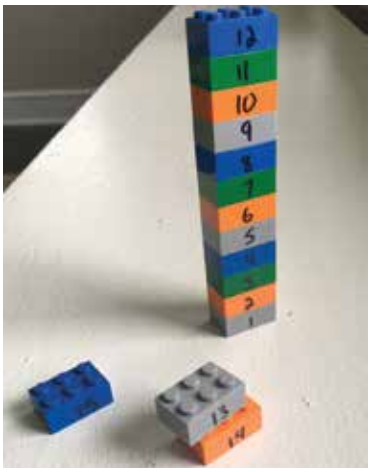
Foam cup option: choose any cup that has a visible rim that you can write on. Have your child stack them in order with the numbers lined up.

Level one: have your student stack the numbers 1-10.

Level two: have your student stack the numbers 0-20.

Level three: start with any number other than one or zero and see if your student can find the next 5 numbers. Many kids struggle to count if they don't start at the beginning, so this is an important skill.

Challenge: if your child has mastered levels 1–3, see if he or she can learn how to order the numbers backward.



Stacking LEGO bricks is a great way to practice ordering the numbers 0–20.

Foam cups work well too because there is space on the rims to write the numbers.

CHAPTER 1: THE NUMBERS 1-10

Lesson 1

Students are not expected to be able to complete the opening activity on their own. They will have lots more practice with counting and numbers throughout this unit. Enjoy introducing the numbers to your child with the opening activity found in the student workbook.

Take it Further:

Students can use the pipe cleaner numbers from the opening activity in lesson one to create a mobile if they like.

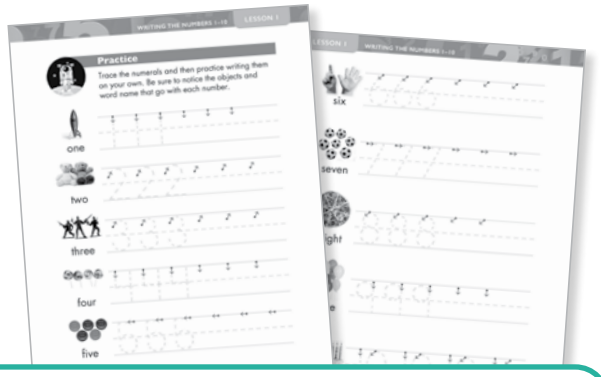
You Will Need:

- ☐ A hanger
- ☐ Ribbon or yarn
- ☐ Pipe cleaner numbers from lesson 1 activity
- ☐ Tape

You Will Do:

1. Cut different lengths of yarn or ribbon.
2. Tie one end to a pipe cleaner number and the other to the hanger. Use tape to hold the numbers in place.
3. Hang your mobile somewhere where you can enjoy it.

Word names for numbers are introduced in this lesson. We want students to recognize them, but they are not expected to be able to write them at this level. What is most important is for them to start seeing the connection between numerals and the corresponding amount. Their skill with word names will grow as they also become stronger readers.



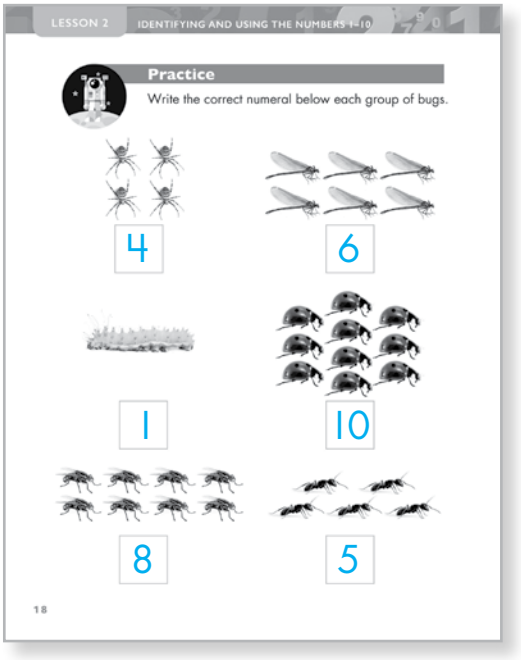
Note:

Student copywork should reflect the student's writing skills. Please encourage your child to be neat, but be patient if he or she is struggling. First graders will be at different places with their fine motor skills and their ability to write clearly.

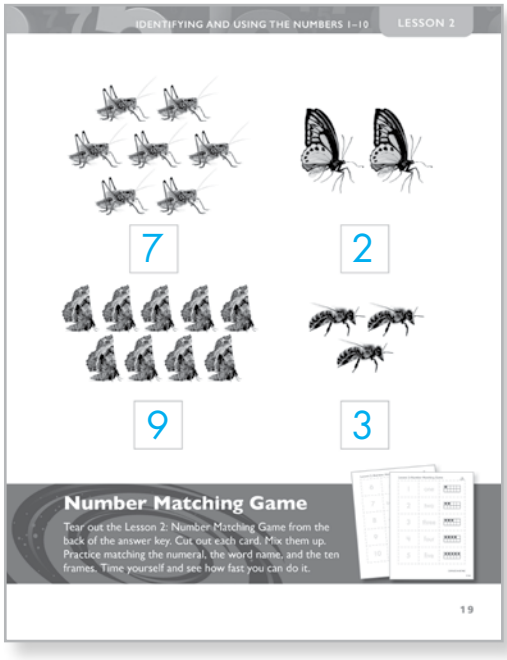
Lesson 2

Students are not expected to know how many objects are in a group automatically. They should be counting up the bugs. Spend some time with your child reviewing the numerals and names for each number. Answers to the questions on page 17 will vary.

Page 18 Answers

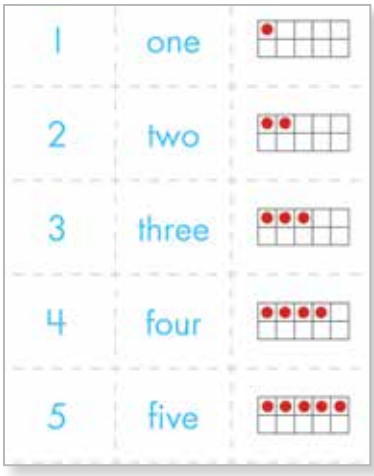


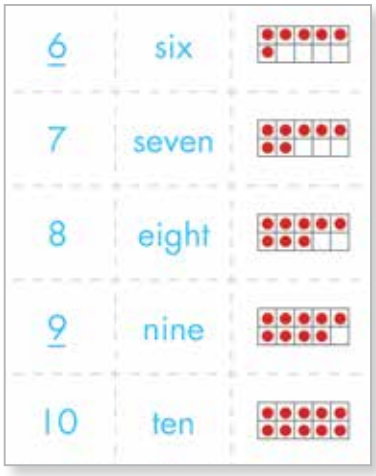
Page 19 Answers



Number Matching Game Solutions

The Number Matching Game can be played as a quick review in the future too. You might even want to laminate the cards. Keep the cards in an envelope or a small plastic bag. You will use them again in lesson 8.



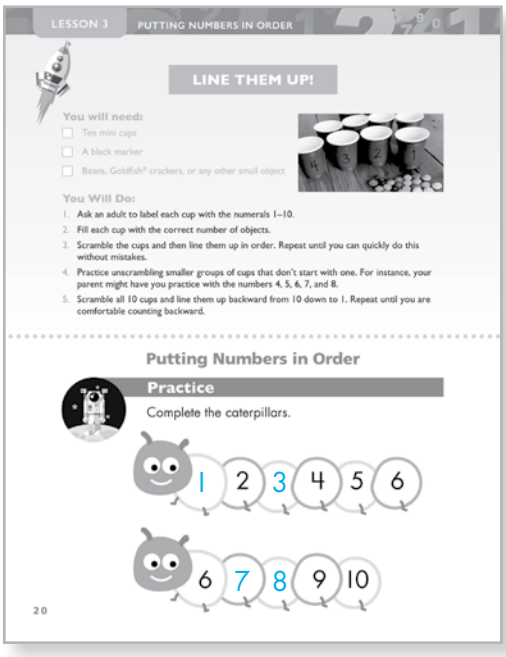


Lesson 3

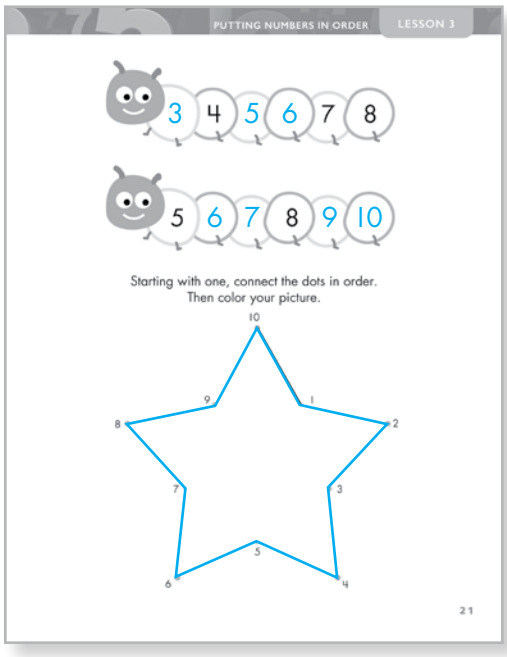
Students will continue to practice putting numbers in order throughout this unit as their skills practice. This lesson's opening activity is just an introduction using the numbers one through ten. Students are not expected to master the skill through this one activity. Continue working on it throughout the unit as explained in the unit 1 skills practice on p. 14 of this answer key, and they will retain it.

Take It Further: Line up the cups 1–10 in order. When your child isn't looking, remove one of the cups. Be sure to reposition the cups so there is no gap showing. See if your child can figure out which cup you removed. This can also be a fun game for kids to play with friends. Once your student masters each task, have him or her practice putting the cups in reverse order from 10 down to 1.

Page 20 Answers



Page 21 Answers



Lesson 4

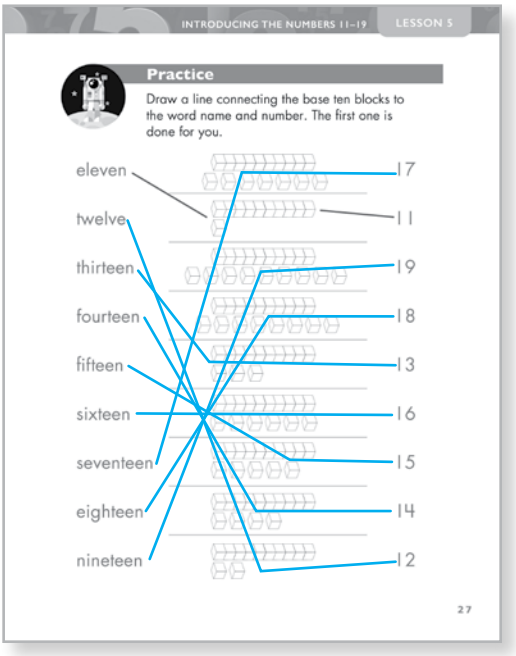
The number collage should take 2 days. Use the first day to find all your numerals and examples. The second day can be dedicated to assembling the collage. Ignore place value when looking for the numerals. If your child finds the number 95, he or she can cut it apart and use it as a 9 and a 5. Also, naturally occurring examples are better than ones that are contrived. For instance, 4 chairs at a table or 7 seats in a car is better than putting 5 beans on the table and taking a picture. The coloring page of 10 Rules to Live By is optional.

CHAPTER 2: THE NUMBERS 0-20

Lesson 5

The opening activity is designed to help students notice the connection between the number 10 and the 1 at the beginning of the teen numbers. Your child might describe that pattern in different ways but as long as they notice a pattern they will be prepared for the lesson. Reuse this activity if your child needs help remembering the teen names. Your child can bend over the flap and say the name to get more practice.

Page 27 Answers



Teen number word names can be very tricky for kids. It's not their fault. The teen numbers in English are confusing! The poems in the lesson can help them remember the names. Try chanting or singing the poems regularly.

You may need to sit with your student and help them with the number names on this practice sheet. Encourage them to at least guess at the names before you help them. Place value will be introduced in unit three. For now, students are only expected to count up to 20 and to use counting to match the numerals to the correct number of objects. They are not expected to understand tens and ones yet. Take a few minutes before the practice to point out to your student that a rod is always 10 so that they don't have to count each square each time.

Lesson 6

Students are asked to build towers in the opening activity because this tactile approach really helps them see the relationship between 10 and the teen numbers. However, you will need 145 linking cubes or LEGO bricks to build all the numbers. If you don't have those, here are two alternatives:

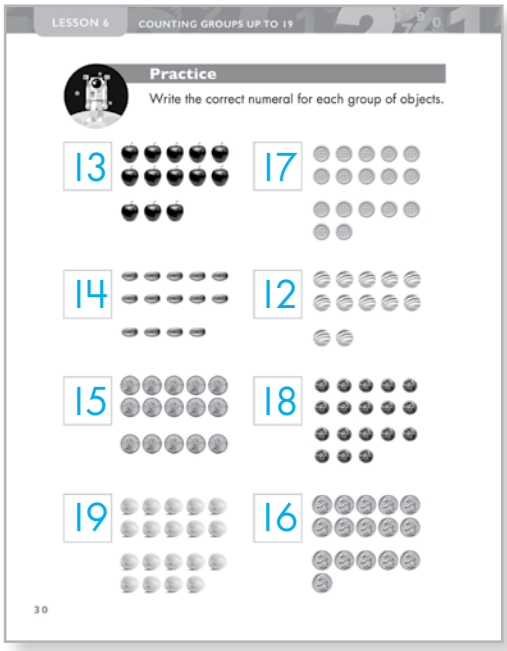
- Buy a bag of white grapes and a bag of red grapes. Have your child make grape kebobs. First, he or she should skewer 10 white grapes and then add the appropriate

number of red grapes. Choose smaller grapes for the numbers over 15 so that they will all fit on the skewer.

- Use toilet paper. Have students tear off 10 squares first. Then have them tear off one more to show 11 and so on. The advantage of this method is that the toilet paper is cheap and reusable.

In the counting beans activity, you'll need to choose an appropriate amount of beans for them. Start with 12 and then another amount between 11 and 15. As they grow more comfortable using the ten frame, practice all the numbers up to 19.

Page 30 Answers

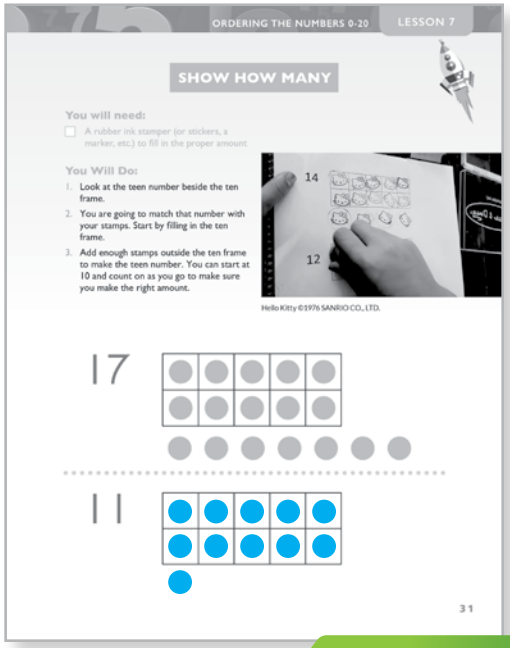


Lesson 7

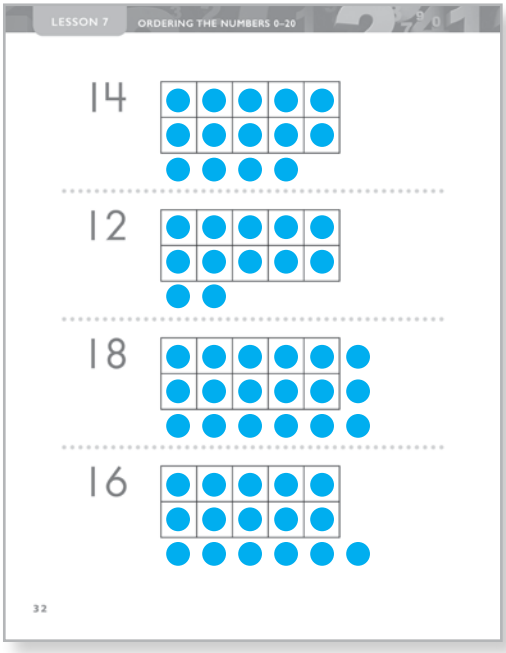
Check your student's answers to the activity. Encourage them to use groups of ten and counting on as they move forward in their studies.

The number zero is introduced in this lesson. You can also have some fun with this by asking them questions throughout the day where the answer is zero (How many kids are sleeping right now? How many sandwiches are left? etc.).

Page 31 Answers

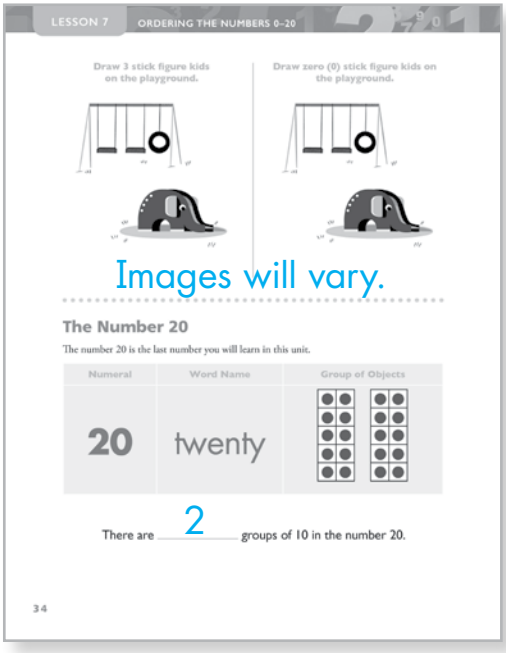


Page 32 Answers

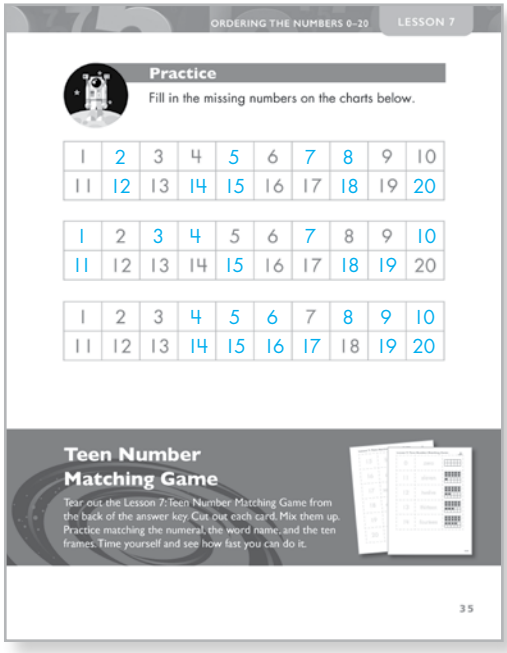


Page 33 Answers

Page 34 Answers



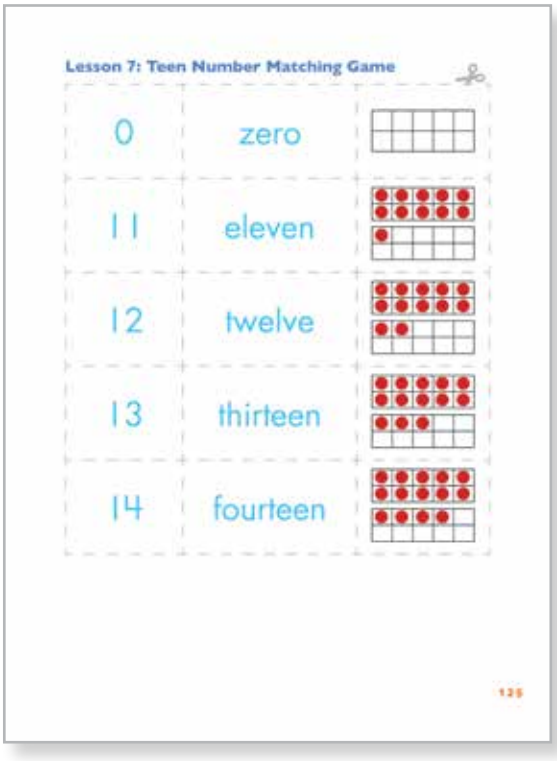
Page 35 Answers

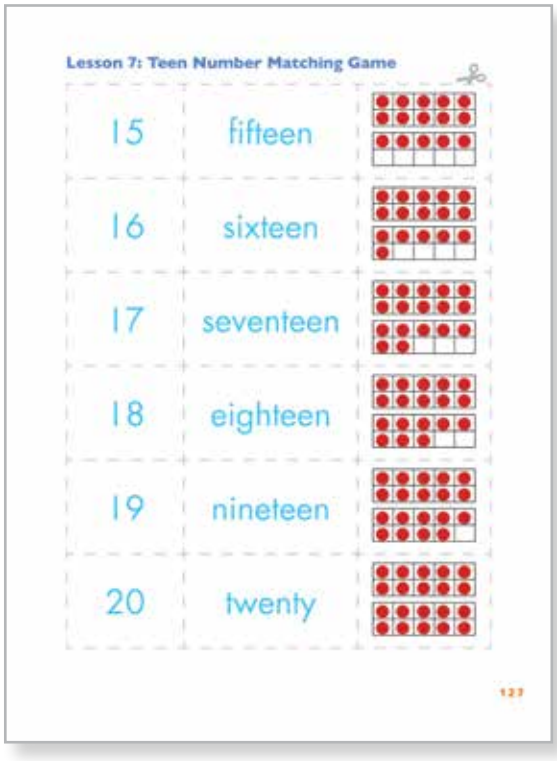


Teen Number Matching Game Solutions

When you are done with the Teen Number Matching Game at the end of this lesson, put it in an envelope and place it in a safe place, maybe inside the back cover of this answer key. You will use it again in lesson 8 and in chapter 9.

Take It Further: Line up the teen number cards from the matching game in order and hide one. See if your student can figure out which one is missing.





Take It Further: Use the number cards and names to play Memory with your student. Mix the cards up and place them in a logical pattern face down. Each player takes a turn flipping over 2 cards. If the number and the name match, the player takes those 2 cards. If they do not match, the cards are flipped over again. The game ends when all the cards have been matched and the player with the most cards wins.

Lesson 8

If you have misplaced the number matching cards from lessons 2 and 7 (it happens to all of us) you can print a new set from the Book Extras website.

Take It Further: There are many other fun ways to practice ordering numbers.

1. Popsicle® picture. You have to spend some time making the puzzle for your children but imagine their joy at seeing their own picture used as a puzzle. Glue sections of a photo to Popsicle sticks. Label the ends of the Popsicle sticks with numbers. Scramble the sticks and have your children practice putting them in order, using the numbers as their guide. When they do it correctly, they will see the completed picture.

2. Number puzzle. You can also create a number puzzle for them where each number is paired with a letter. When they put the numbers in the correct order, they solve the puzzle.

3. Solving riddles. If your child likes to solve riddles, create the answers to these questions using the method for #2.

Why do math books like students?
They solve problems

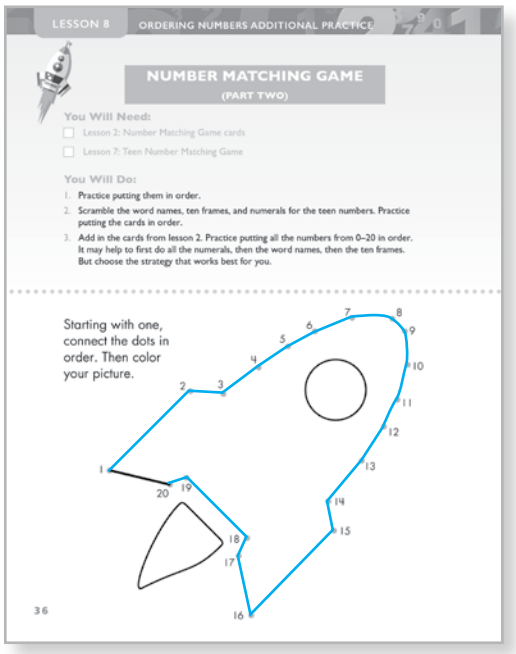
Why couldn't the bicycle stand up?
It was two-tired

Where do fish keep their money?
In the river bank

Why is six afraid of seven?
Seven ate nine

What did the hands tell the student?
You can count on us

Page 36 Answers


LESSON 8 ORDERING NUMBERS ADDITIONAL PRACTICE

NUMBER MATCHING GAME
(PART TWO)

You Will Need:
- Lesson 2: Number Matching Game cards
- Lesson 7: Teen Number Matching Game

You Will Do:
1. Practice putting them in order.
2. Scramble the word names, ten frames, and numerals for the teen numbers. Practice putting the cards in order.
3. Add in the cards from lesson 2. Practice putting all the numbers from 0–20 in order. It may help to first do all the numerals, then the word names, then the ten frames. But choose the strategy that works best for you.

Starting with one, connect the dots in order. Then color your picture.

36

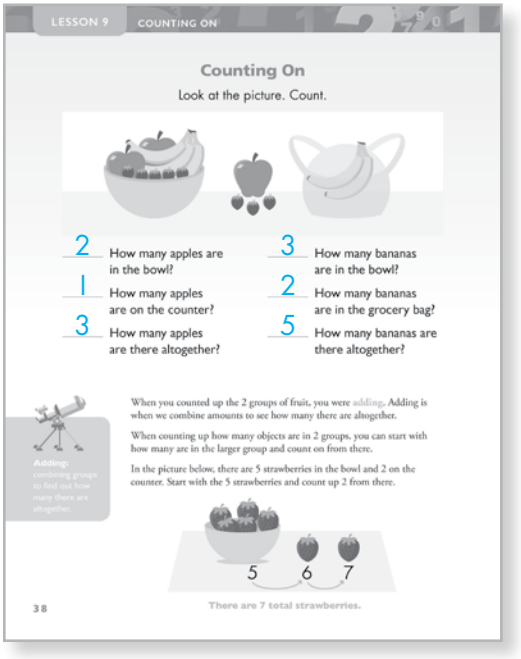
CHAPTER 3: ADDITION

In this chapter, addition is introduced in its simplest form by counting up 2 sets to get the total. Students are not expected to start memorizing facts in this chapter. Instead, they will start to recognize patterns such as when we add on a zero or one. In chapter 4, number bonds will be introduced as a way to think about adding in terms of relationships.

Lesson 9

The first strategy for adding is counting on. This strategy will continue to help kids with mental math as they progress. For now, it is included as the first step in transitioning them from counting in a sequence to counting up a total. In the practice at the end of the lesson, feel free to guide them toward adding on smaller numbers like one and two until they grasp the concept.

Page 38 Answers


LESSON 9 COUNTING ON

Counting On

Look at the picture. Count.

2 How many apples are in the bowl?

1 How many apples are on the counter?

3 How many apples are there altogether?

3 How many bananas are in the bowl?

2 How many bananas are in the grocery bag?

5 How many bananas are there altogether?

When you counted up the 2 groups of fruit, you were adding. Adding is when we combine amounts to see how many there are altogether.

When counting up how many objects are in 2 groups, you can start with how many are in the larger group and count on from there.

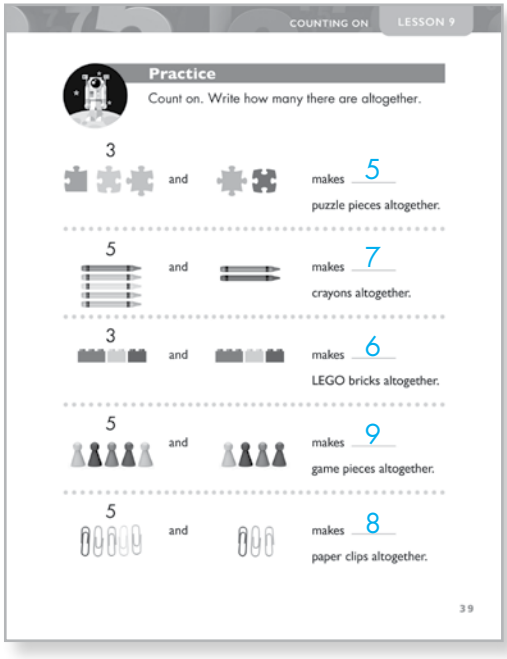
In the picture below, there are 5 strawberries in the bowl and 2 on the counter. Start with the 5 strawberries and count up 2 from there.

5 6 7

There are 7 total strawberries.

38

Page 39 Answers


COUNTING ON LESSON 9

Practice

Count on. Write how many there are altogether.

3 and makes 5 puzzle pieces altogether.

5 and makes 7 crayons altogether.

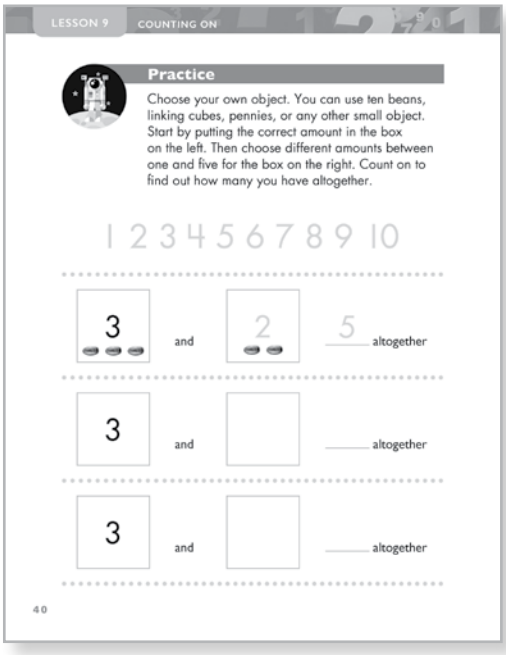
3 and makes 6 LEGO bricks altogether.

5 and makes 9 game pieces altogether.

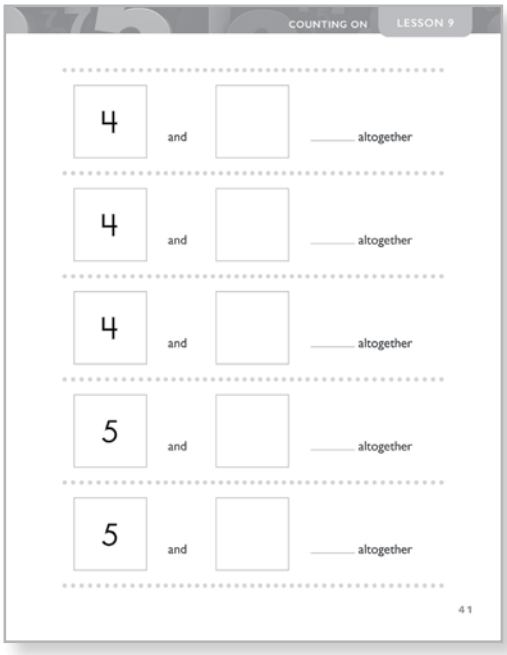
5 and makes 8 paper clips altogether.

39

Page 40 answers will vary.



Page 41 answers will vary.

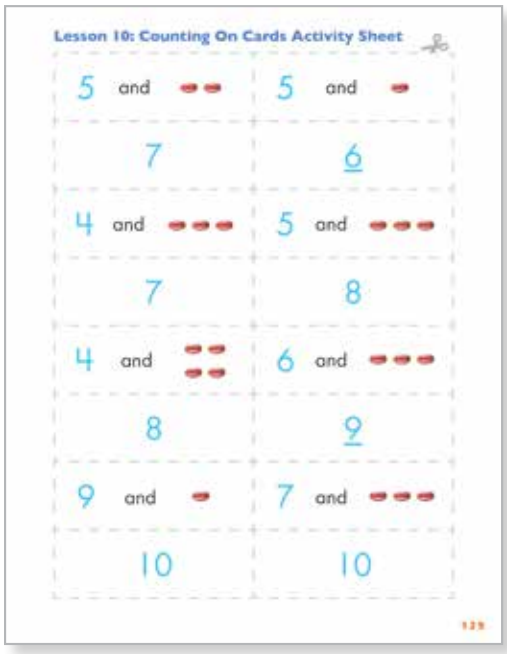


Lesson 10

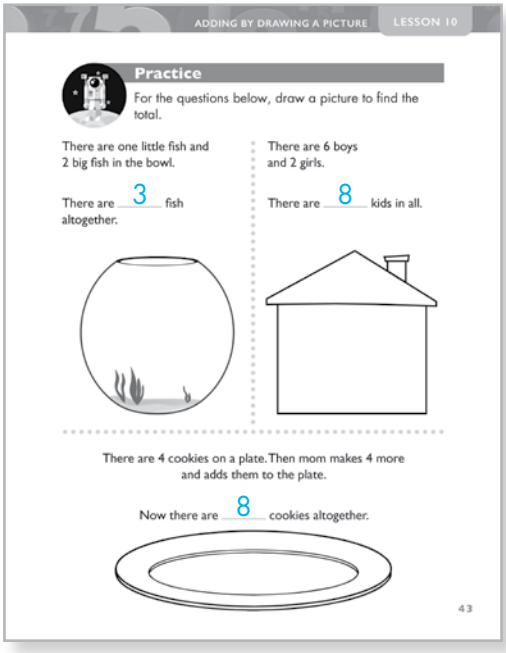
Keep the Counting On Cards in an envelope. You will use them again in lesson 12.

The pictures for the math problems on page 43 can be as simple or elaborate as your children want to make them. If they want to draw detailed fish and that is fun for them, that's just fine. But stick figures and simple shapes are fine too. The strategy of drawing a picture is one that will continue to help them through higher-level math.

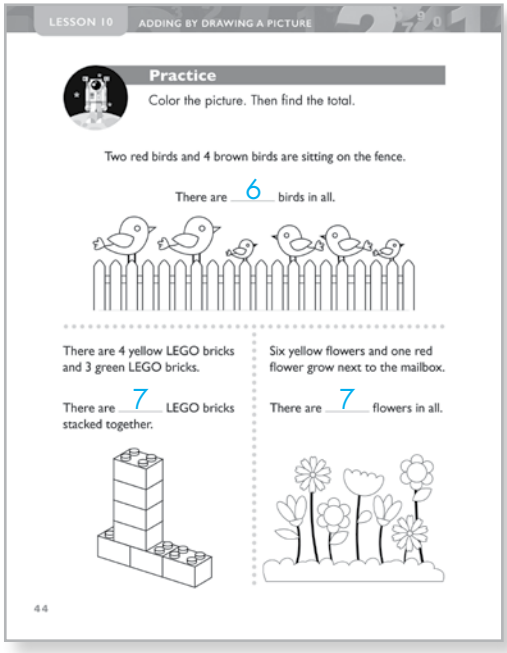
Counting On Cards Solutions



Page 43 Answers



Page 44 Answers

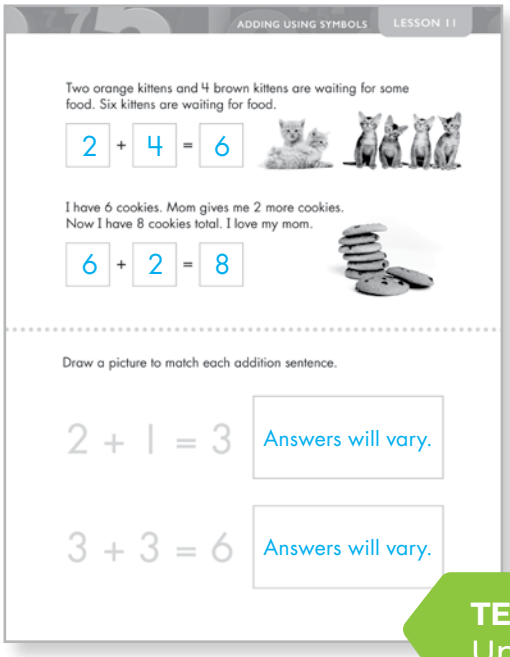


Lesson 11

For a twist in the opening activity, you can let your child choose if he or she wants to roll one or two dice. This adds some strategy to the game. Some games in this program are for 2 players because it adds some fun competition. You can feel free to jump in as the second player. But it can also be a great way to involve a sibling or friend.

Page 46 Answers

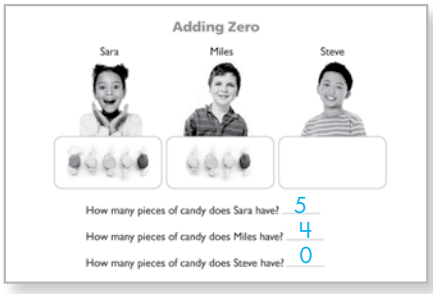
Page 47 Answers



Lesson 12

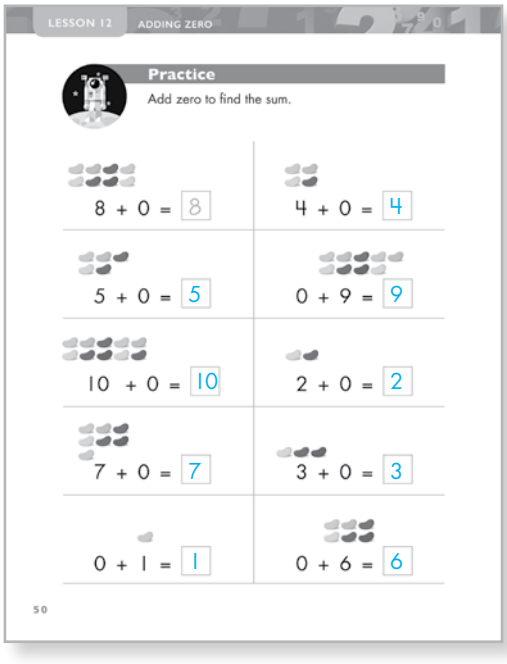
Work with your child as he or she solves the activity matching cards. Make sure they write the correct number sentence for each. Learning to add zero should be a lot of fun for most kids. The coloring page is included at the end of the lesson to give them plenty of practice.

Page 48 Answers

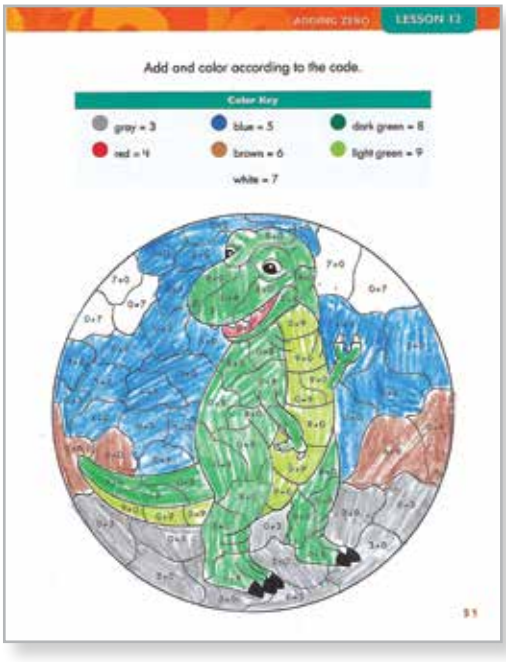


Page 49 Answers

Page 50 Answers



Page 51 Answers



Lesson 13

Printable dominoes are available on the Book Extras website in case you do not own a set. You may wish to print them on a thicker paper..

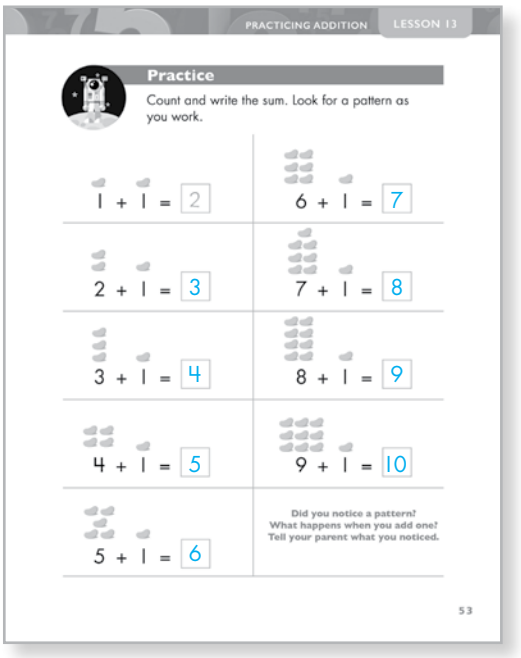
The first goal of the Stack 'Em! game is to practice counting and adding. But the second goal is exposure to different number bonds, or different ways to find the same sum. Number bonds is the topic of chapter 4. If you play the game enough times, kids will start to notice that certain numbers are more likely to have the tallest stack. That is because they have more different number bonds. If you'd like to keep using the same page over and over, you can have players place a game piece next to their prediction rather than write their name. Also, this game can be played by an individual. In that case, the student is just challenging himself or herself to pick the right spot.

Easier option: Select only dominoes with sums up to 5. Build on from there.

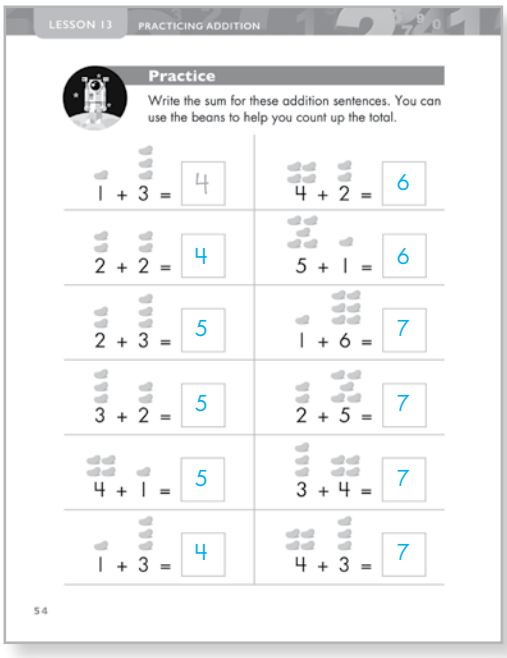
Challenge: Have students clearly state the number sentence each time they stack a domino.

On page 53, students should start to notice a pattern with adding one so that they don't have to count to find the sum. On page 54 they can use this pattern to easily solve the problems that involve adding one.

Page 53 Answers



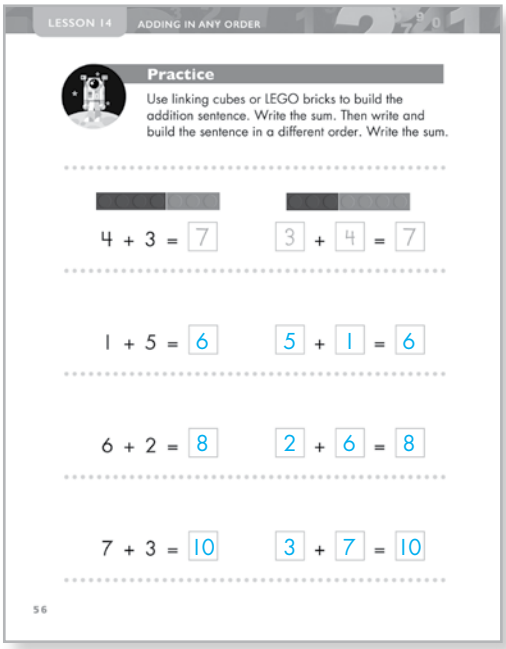
Page 54 Answers



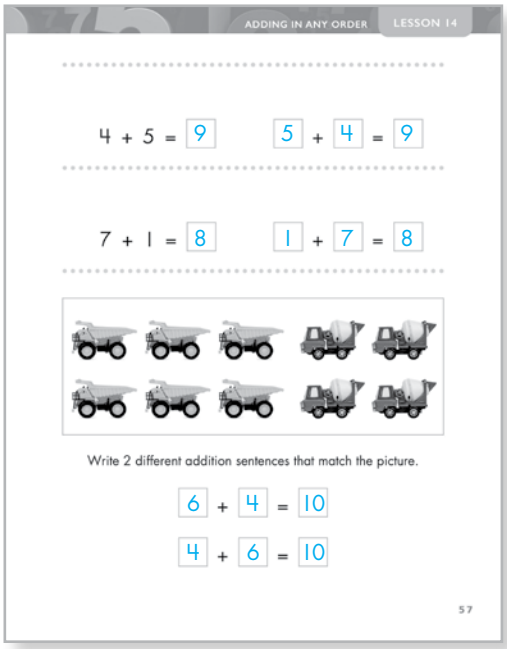
Lesson 14

For the activity, you can use any item that stacks or snaps together. You could even use counters that are 2 different colors. You just need to make sure you have 2 different groups of items so that kids can quickly recognize the difference in order.

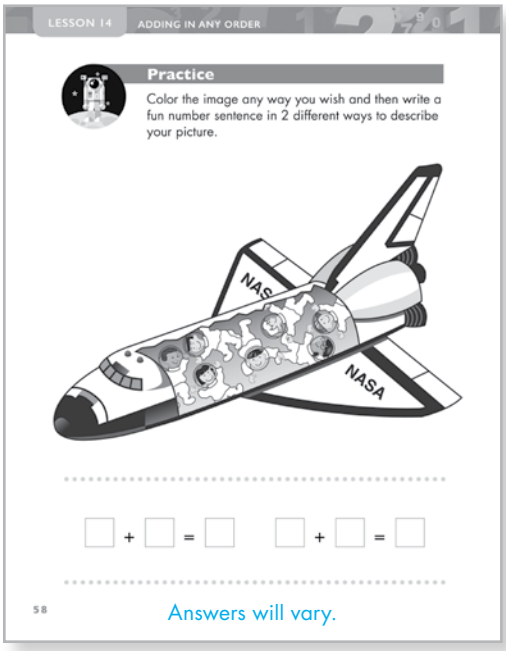
Page 56 Answers



Page 57 Answers



Page 58 Answers



CHAPTER 4: FINDING DIFFERENT WAYS TO MAKE SUMS

In this chapter, we focus on all the different ways you can add to get a certain number. For instance, all the ways you can add to get 7 are listed below.

0+7	2+5	4+3	6+1
1+6	3+4	5+2	7+0

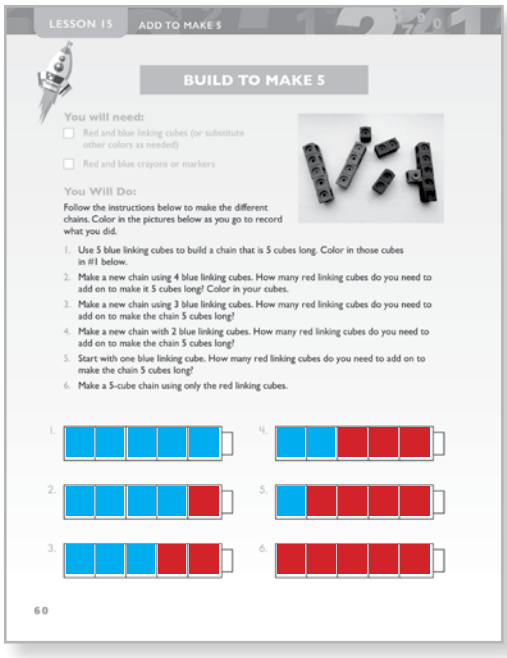
Learning these groups of facts helps kids develop a sense of the relationship between numbers. It also helps them memorize the facts in the future. Take some time to show your child that once he or she knows a fact like 0 + 7, the fact 7 + 0 is already learned as well!

Lesson 15 starts with ways to make 5 because there are so few ways to make the numbers smaller than 5, that it can be confusing. Each lesson focuses on making a different number until we get to 10. A whole lesson and the Fishing for Tens Game are dedicated to the topic of making tens. Learning to make tens is a foundational skill for many future topics.

Lesson 15

There are two activities for this lesson. Since this is the first time kids practice making numbers in different ways, it is presented first by building towers and then by sorting candy.

Page 60 Answers



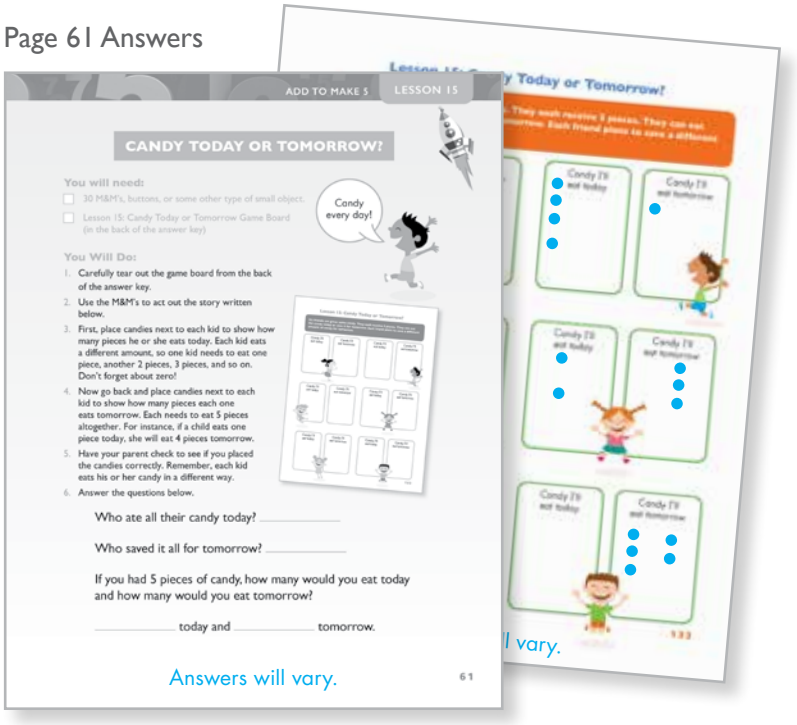
Candy Today or Tomorrow Solutions

When they sort the candy, their answers may vary. As long as they have each kid eating his or her candy in a different way, their answers are considered correct. Your child should have the candy distributed using the following patterns:

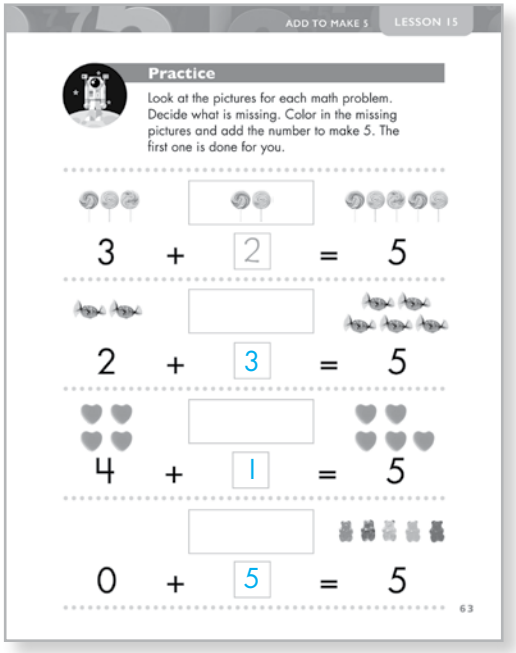
Today	Tomorrow
0	5
1	4
2	3
3	2
4	1
5	0

Take it Further: You can add some candy to the blank sheet and see if your child can fill in the missing candies.

Page 61 Answers



Page 63 Answers: Pictures will vary, but they should match the correct number.



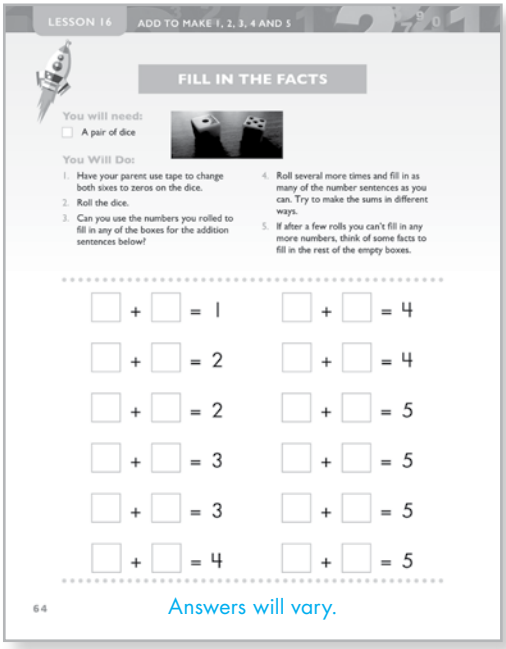
Lesson 16

The goal of this activity is to help children make connections between numbers and number facts. Play alongside of your student and check the answers.

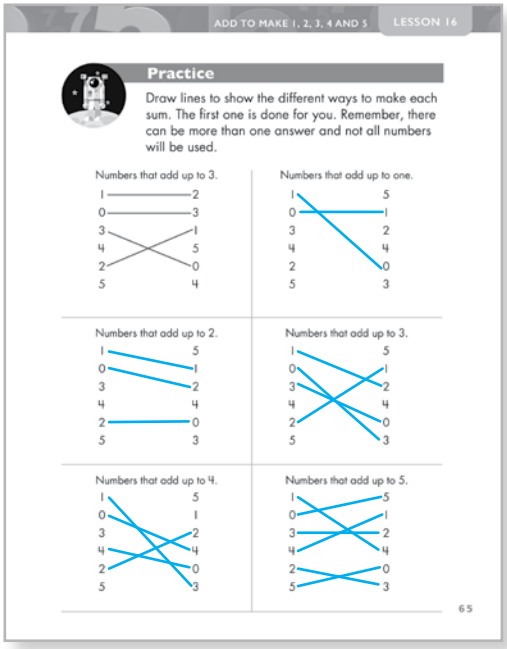
The practice is designed specifically so students can see both orders for each fact.

0 + 1 = 1 and 1 + 0 = 1

Page 64 Answers

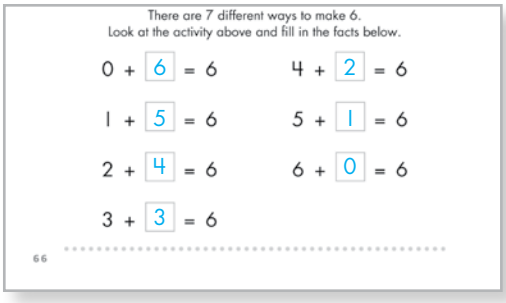


Page 65 Answers



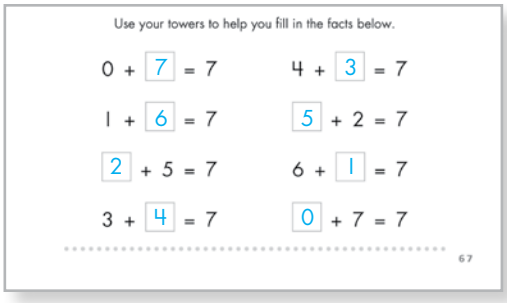
Lesson 17

Page 66 Answers



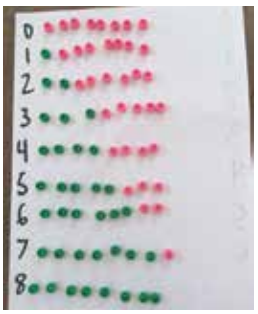
Lesson 18

Page 67 Answers

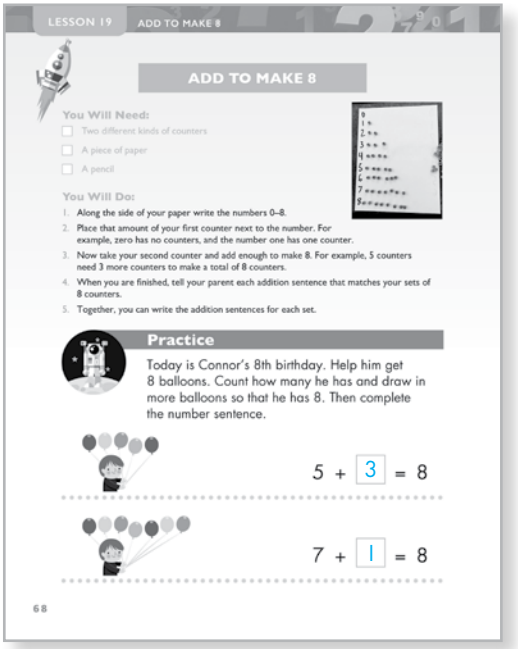


Lesson 19

The opening activity is quite simple, but it is a great way to help kids visualize the different ways you can make numbers. They will be repeating this activity with the number 10 in a couple of lessons. If they have trouble saying the addition sentence, you can help them. Seeing it written down next to the group will help them with the rest of the lesson.



Page 68 Answers:
Students should draw balloons that match the numbers in their number sentence.


LESSON 19 ADD TO MAKE 8

ADD TO MAKE 8

You Will Need:
- Two different kinds of counters
- A piece of paper
- A pencil

You Will Do:
1. Along the side of your paper write the numbers 0–8.
2. Place that amount of your first counter next to the number. For example, zero has no counters, and the number one has one counter.
3. Now take your second counter and add enough to make 8. For example, 5 counters need 3 more counters to make a total of 8 counters.
4. When you are finished, tell your parent each addition sentence that matches your sets of 8 counters.
5. Together, you can write the addition sentences for each set.

Practice

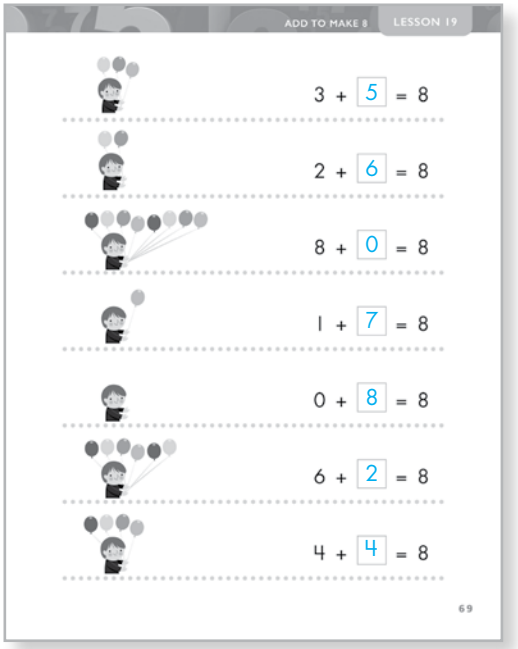
Today is Connor's 8th birthday. Help him get 8 balloons. Count how many he has and draw in more balloons so that he has 8. Then complete the number sentence.

5 + 3 = 8

7 + 1 = 8

68

Page 69 Answers


ADD TO MAKE 8 LESSON 19

3 + 5 = 8

2 + 6 = 8

8 + 0 = 8

1 + 7 = 8

0 + 8 = 8

6 + 2 = 8

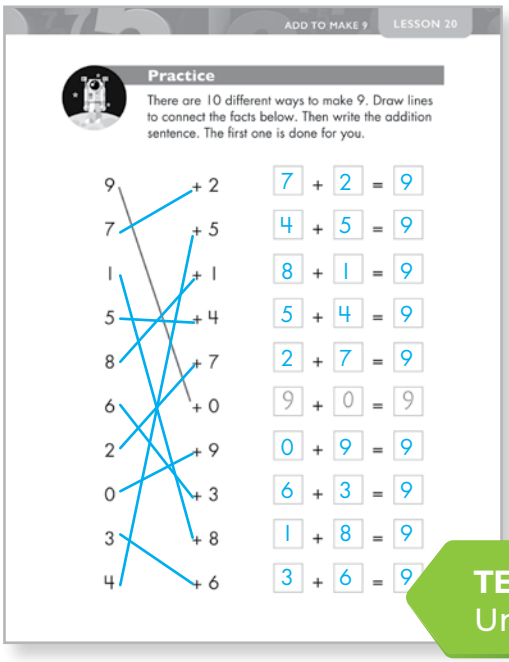
4 + 4 = 8

69

Lesson 20

Dominoes are a great way to see the different ways to make a certain sum. You can do a similar activity with dice. Have your child roll dice to find all the different ways to make a certain sum like seven. The disadvantage of dice is that there is no zero.

Page 71 Answers


ADD TO MAKE 9 LESSON 20

Practice

There are 10 different ways to make 9. Draw lines to connect the facts below. Then write the addition sentence. The first one is done for you.

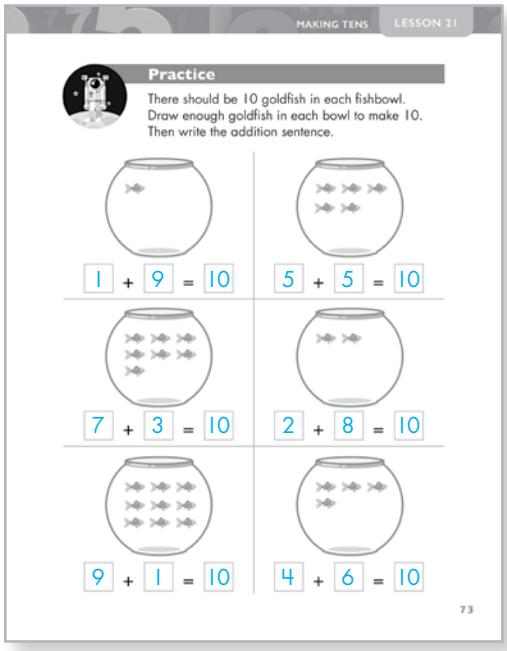
9	+ 2	7 + 2 = 9
7	+ 5	4 + 5 = 9
1	+ 1	8 + 1 = 9
5	+ 4	5 + 4 = 9
8	+ 7	2 + 7 = 9
6	+ 0	9 + 0 = 9
2	+ 9	0 + 9 = 9
0	+ 3	6 + 3 = 9
3	+ 8	1 + 8 = 9
4	+ 6	3 + 6 = 9

Lesson 21

If your students have trouble writing the addition sentence in the opening activity, you can help them. Seeing it written down next to the group will help them with the rest of the lesson.

Be sure to save the Number Facts sheet from lesson 21. It will be helpful in the unit project.

Page 73 Answers: Students should draw an appropriate number of fish in each bowl.



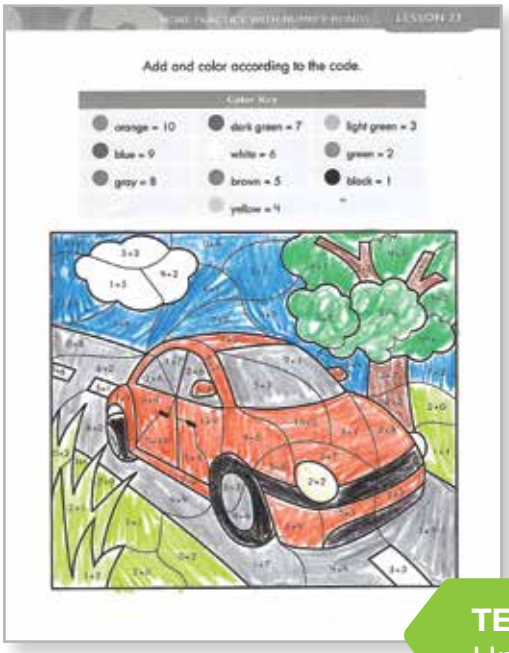
Lesson 22

You can include a younger sibling in the Fishing for Tens Game. Instead of making tens, younger students can just practice matching numbers. The game will still work just fine. Because this is the only assignment for the day, feel free to play several rounds of the game.

Lesson 23

The coloring page is a mixed review of the different facts students have been practicing. It provides a day of reinforcement before we move on to word problems. They will also continue to practice these facts in the unit 2 skills practice.

Page 75 Answers



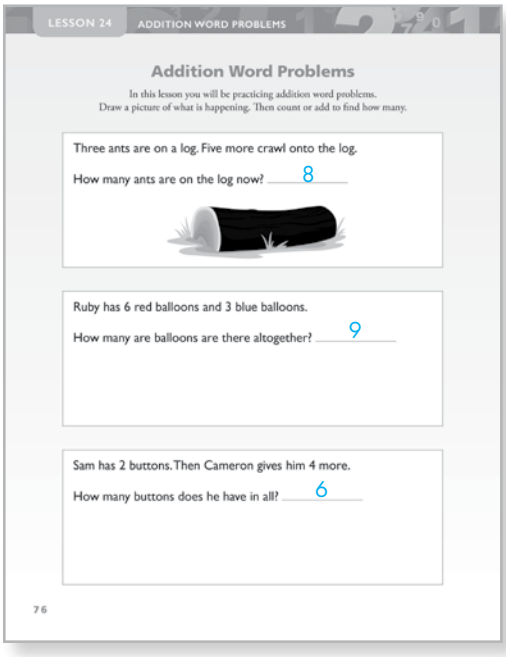
Lesson 24

Colored pencils or crayons can make it easier to draw the images.

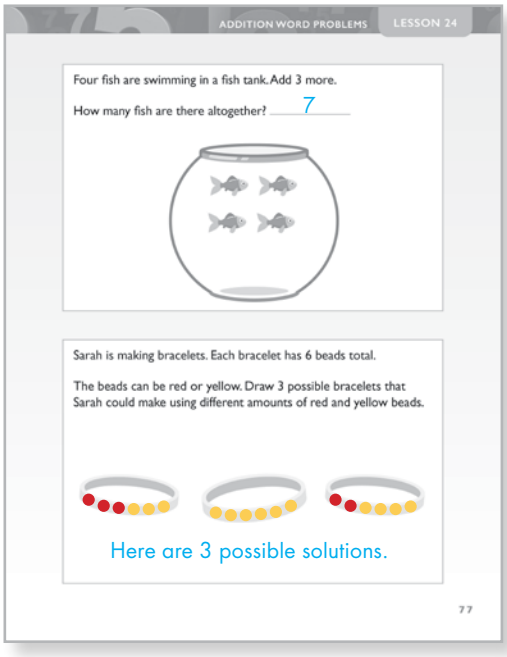
Take It Further: If your children are interested in the bracelet problem, you can have them try to find all the possible ways Sarah can make her bracelets (there are 7). Have them draw their answers on a separate sheet of paper or even act it out with real beads. The answers include:

0+6	2+4	4+2	6+0
1+5	3+3	5+1	

Page 76 Answers: Student drawn images should match the number problems



Page 77 Answers



Unit 1 Project:

Making the number book allows your student to combine everything he or she has learned in this first unit. The focus is on having the student represent a number in several different ways. Let your student use the Number Fact sheet from lesson 21 to complete the number bonds.

Be sure to have your student share the project with someone if you can. It's important to celebrate these little milestones as students work their way through this book.

COMPLETE SUPPLY LIST

- Linking cubes
- Base ten blocks
- 3D shape solids
- Pattern blocks
- Addition flash cards (up to 20)
- Subtraction flash cards (up to 20)
- 3 dice
- Dominoes
- Uno® cards
- LEGO bricks
- Foam cups
- Markers
- Eleven pipe cleaners
- Fifty-five beads
- Mini cups
- 100 small objects for counting (such as beans)
- Scissors
- One poster board
- Magazines OR phone and printer access
- Ruler or straightedge
- Glue
- Tape
- Crayons
- A rubber ink stamp
- Dot stickers
- Playdough®
- A tennis ball
- Note cards
- A tape measure
- Paper clips
- A brass fastener
- 15-20 coins
- 2 bags of M&M's (the smallest fun size bag is perfect)
- Colored pencils
- Air dry clay
- Two wooden blocks
- Paint and paintbrush
- A cup or circular cookie cutter
- Yardstick
- Chalk
- Dry erase marker
- Permanent marker
- Game pieces
- Calculator (optional)
- 2 Liquid containers
- Pan
- 2 Dry containers
- Rice