

Lesson 3 Make the Next Ten

Objective

- Add a one-digit number to a two-digit number by composing a 10.

Lesson Materials

- Linking cubes

Think

Ask students what strategies could be used to figure out how many acorns the squirrel will bury in all.

Have students make 28 with linking cubes. Once they have 28, give them 5 more cubes. If students don't suggest the Make Ten strategy they learned with numbers to 20, suggest they use this idea to make another 10.

Ask students:

- If you have 8 ones, how many more ones will make a 10? (2)
- Where can we get 2 ones? (From the 5)

Have students add 2 to the 8 loose ones and make another 10. Ask questions like:

- What number did we make with 8 ones and 2 ones? (10)
- Where did the 2 come from? (5)
- How many of the 5 are left? (3)
- What is 30 and 3? (33)

Reinforce that it's easy to add with a ten-number by asking students questions like, "What is 20 and 5? 30 and 7? 20 and 4?"

Learn

Have students relate what Dion is thinking to how they added with the linking cubes.

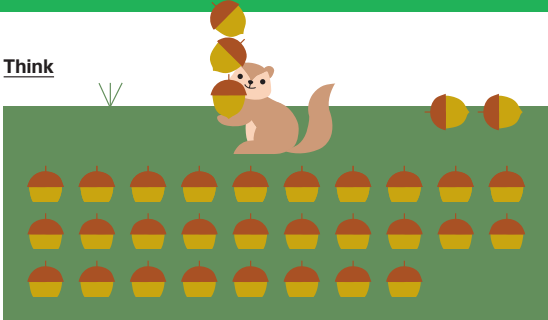
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Lesson 3

Make the Next Ten

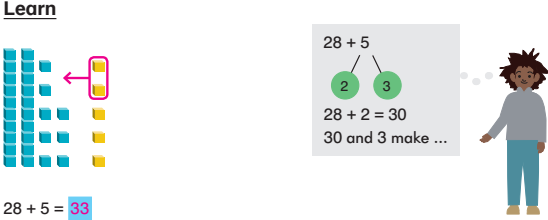
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Think



The squirrel buried 28 acorns.
She will bury 5 more acorns.
How many acorns will she bury in all?

Learn



$28 + 5 = 33$

She will bury 33 acorns in all.

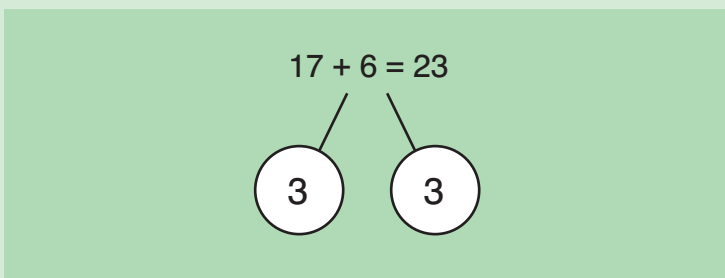
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Do

- 1 Have students use linking cubes for these problems as needed.
- 2–3 These problems are scaffolded to see the progression of the strategy.

$17 + 3 = 20$	“17 plus 3 is 20.”
$17 + 6 = 20 + 3$	“17 and 6 is the same as 17 plus 3, plus 3 more.”
$17 + 6 = 23$	“So 17 plus 6 is the same as 20 plus 3.”

Have students show the number bonds or show them on the board for students to see and discuss:



Do

- 1 (a) $26 + 4 = 30$ (b) $26 + 6 = 32$
- 2 $8 + 2 = 10$ $28 + 2 = 30$ $28 + 5 = 33$
- 3 (a) $17 + 3 = 20$ $17 + 6 = 20 + 3$ $17 + 6 = 23$
 (b) $25 + 5 = 30$ $25 + 8 = 30 + 3$ $25 + 8 = 33$
 (c) $12 + 8 = 20$ $12 + 9 = 20 + 1$ $12 + 9 = 21$
- 4 (a) $9 + 21 = 30$ (b) $33 + 7 = 40$
 (c) $27 + 6 = 33$ (d) $13 + 9 = 22$
 (e) $4 + 28 = 32$ (f) $5 + 35 = 40$

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Lesson 1 Adding Equal Groups

Objectives

- Recognize equal groups.
- Find the total number in equal groups by repeated addition.

Lesson Materials

- Linking cubes or counters of the same color, 20 per student or pair of students

Think

Ask students what they notice about the different foods that Dion is asking about.

Point out that most of the foods are in equal groups. The avocado roll pieces are not. Challenge students to see if they can put the avocado roll pieces into equal groups. Using linking cubes, have students figure out how many of each type of food there are.

Have students share their strategies.

Ask students if they can write equations for the foods to figure out how many of each kind there are.

Learn

Have students look at page 67 and discuss the dumplings in the first example.

Have students note the equations and how the equations are related to the pictures. Prior to this, students have only seen expressions with three addends. Note the use of language rather than a sign for multiplication at this stage.

Encourage students to use and share addition strategies they have learned to solve the problem. For additional practice, ask students, “What happens when we change the number of groups?”

- How would the equation change if we covered up a plate of dumplings?
- How would the equation change if there was another plate of shrimp tempura?

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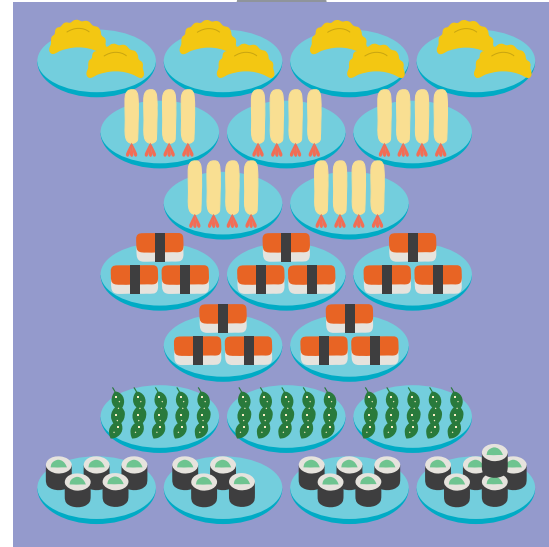
Lesson 1 Adding Equal Groups

1

Think

How many of each kind of food are there?

8 dumplings
20 shrimp tempura
15 salmon sushi
15 edamame
20 avocado rolls



66

14-1 Adding Equal Groups

Learn



There are 2 dumplings in each group.
There are 4 groups.

$$2 + 2 + 2 + 2 = 8$$

4 twos is 8.

There are 8 dumplings altogether.



$$4 + 4 + 4 + 4 + 4 = 20$$

There are 5 groups of 4 shrimp tempura.

5 fours is 20.

There are 20 shrimp tempura altogether.



There are 5 groups of 3 salmon sushi.

$$3 + 3 + 3 + 3 + 3 = 15$$

5 threes is 15.

There are 15 pieces of salmon sushi altogether.

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14-1 Adding Equal Groups

67

Objective

- Understand situations involving sharing a number of objects equally.

Lesson Materials

- Plates, 6 per student (or draw circles on whiteboards to represent plates)
- Counters, 12 per student
- The Doorbell Rang* by Pat Hutchins

Think

Provide students with counters to represent the mandarin oranges and plates, and have them figure out how many mandarin oranges each child will have if they share them equally.

The book *The Doorbell Rang* by Pat Hutchins works through similar problems with cookies and would be a good introduction to this concept.

Learn

Have students discuss the first example of 12 oranges shared among 3 children. Bring 3 students up to the front of the room and distribute the oranges (counters) as in the first **Learn** example.

In **Learn** examples (a) through (c), have students work through these examples with their counters and plates. Use circles on whiteboards if there aren't enough plates for 12 oranges shared among 6 students. This activity could be done in groups of three or four to help manage the plates, textbook, and counters.

In **Learn** (d), ask students what happens if there are 12 oranges and 5 children. Have 5 students come to the front of the room and show that they cannot share the oranges equally.

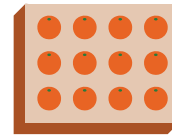
Each child will receive 2 oranges and there will be 2 oranges left over. Students might say you can cut the extra oranges up and pass out the pieces.

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Lesson 2 Sharing

2

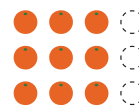
Think



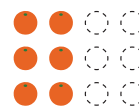
There are 12 mandarin oranges.
3 children share them equally.
How many mandarin oranges will each child get?

Learn

If each child gets 1 mandarin orange ...



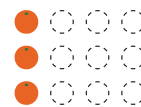
If each child gets 2 mandarin oranges ...



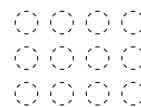
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14-2 Sharing

If each child gets 3 mandarin oranges ...



If each child gets 4 mandarin oranges ...



There are no more mandarin oranges to share.

Each child gets **4** mandarin oranges.

- Divide 12 mandarin oranges equally among 4 children.
How many mandarin oranges does each child get?
3 mandarin oranges
- Divide 12 mandarin oranges equally among 2 children.
How many mandarin oranges does each child get?
6 mandarin oranges
- Divide 12 mandarin oranges equally among 6 children.
How many mandarin oranges does each child get?
2 mandarin oranges
- What happens if we try to divide 12 mandarin oranges equally among 5 children?
Each child will get 2 and there will be 2 left over.

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14-2 Sharing

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Objective

- Introduce dividing shapes into equal parts.

Lesson Materials

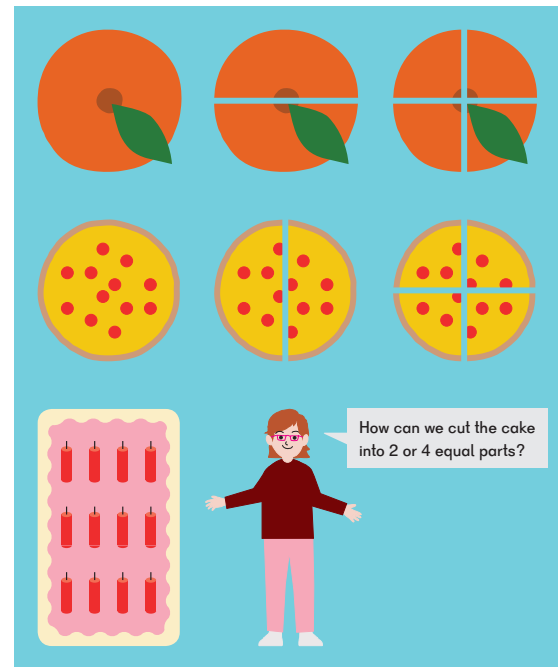
- Foods that can be cut into equal pieces such as oranges, bars, or cakes
- Pattern blocks
- Sheets of rectangular paper, several per student
- Books about fractions (see page 117 of this Teacher's Guide)
- Letter Home for Chapter 15 (optional)

Extend the **Chapter Opener** to a full lesson by:

- Reading one of the books on page 117 of this Teacher's Guide to introduce the topic of dividing objects into equal parts.
- Bringing in things to be cut into equal pieces: oranges, chocolate bars, brownies, cakes, etc. and discuss how to cut them so each person gets an equal (or fair) share.
- Exploring pattern blocks that go together to make other shapes by noting how many equal ones are needed to make a larger shape.
- Folding a rectangular sheet of paper into equal parts. (Students will cut paper into halves and fourths in the next two lessons.)

Chapter 15

Fractions



Objectives

- Fold and cut shapes into halves.
- Recognize halves in shapes.

Lesson Materials

- Sheets of square paper, several per student
- Paper strips
- A variety of paper shapes
- Paper circles or small paper plates
- Scissors

Think

Provide students with square pieces of paper and pose the problem, “How can we fold and cut a square piece of paper so there are two equal parts?”

Allow students adequate time and paper to practice folding. Have them try to fold the paper in half in different ways. Review the term “equal” if necessary. Folding paper into equal parts may take practice.

Provide examples of paper that have been folded, but not into equal parts.

Learn

Introduce the terms “half” and “halves.” When objects are divided into two equal parts, each is “one half” of the whole object.

Have students compare their papers to the ones shown in **Learn**.


Have students trace, then cut their papers in half along the fold lines they have chosen. Have them put the two halves on top of each other to see that they are indeed equal in size.

Have students put the halves together to make the square whole again. Tell students, “When we divide a whole into equal parts, those parts can be put back together to make a whole.”

Lesson 1 Halves

1

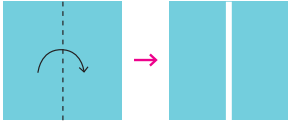
Think




How can we fold and cut the square paper so there are 2 equal parts?

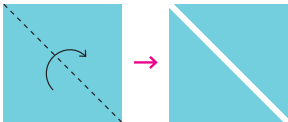
Learn

Fold the paper to make halves.




Each part is 1 half of the whole paper.





Each of these parts is also 1 half of the whole paper.

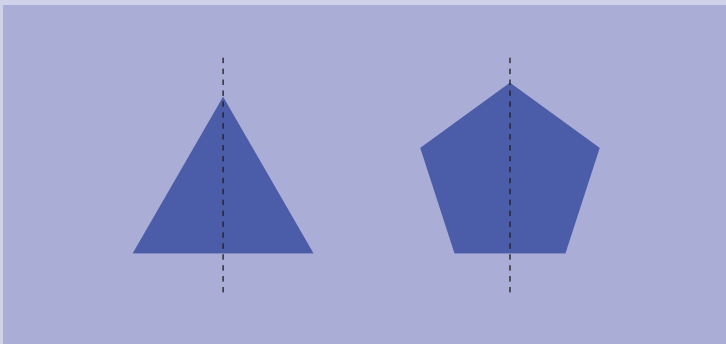


82 15-1 Halves

Do

- 1 Have students fold, trace, and cut the paper strips and circles. Save these shapes for the next lesson on fourths.

Provide students with other shapes cut out of paper and have them fold the shapes into halves.



- 2 (d) Students may not recognize that the diagonal line on the rectangle divides the shape into two equal parts. If they cut it along the diagonal and flip one half to lay on top of the other, they will see that the shape is divided into two equal parts.

Have students trace and cut out shapes if needed.

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Do

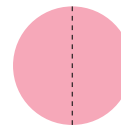
- 1 (a) Fold and cut a strip of paper into halves.



Check if each part is the same size.



- (b) Fold and cut a circle into halves.



Each part is a half circle.



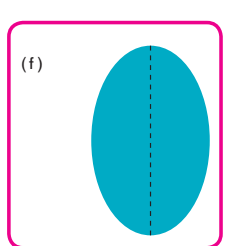
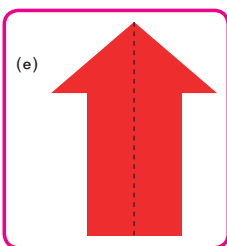
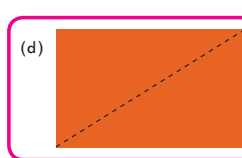
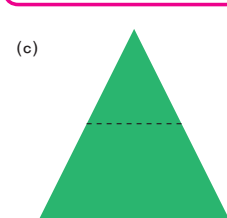
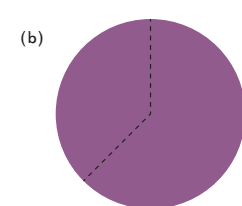
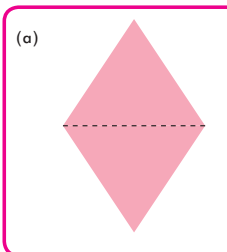
- (c) 2 halves make 1 whole.

15-1 Halves

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83

- 2 Which pictures show halves?



Exercise 1 • page 85

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15-1 Halves

Lesson 3 Practice

Objective

- Practice recognizing halves and fourths.

After students complete the **Practice** in the textbook, have them continue working with halves and fourths by playing games from this chapter.

- 3—4 Have students trace and cut out shapes if needed.

Activity

▲ Race to the Whole

Materials: 4 whole squares per player, multiple halves and fourths cut from squares the same size as the whole square, Fraction Spinner (BLM) or die or spinner modified with sides labeled: $\frac{1}{2}$, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{4}$, roll again, free

Players begin with 4 whole squares each. They take turns rolling the die and placing a fractional piece on one of their wholes. The first player to cover all 4 wholes is the winner.


Use other shapes as the whole. Try rectangles, circles, triangles, or octagons.

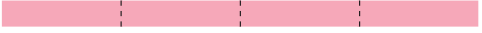
Tip: Have students make the game pieces before playing, then they can play at home with family.

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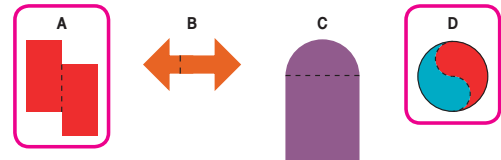
Lesson 3 Practice

P 3

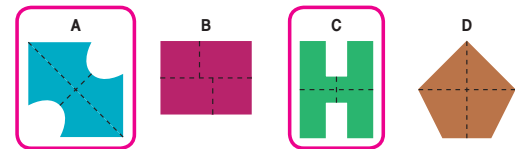
- 1  (a) Each part is **1** half of the whole circle.
(b) There are **2** halves in a whole.

- 2  (a) Each part is **1** fourth of the whole bar.
(b) There are **4** fourths in a whole.

- 3 Which pictures show halves?



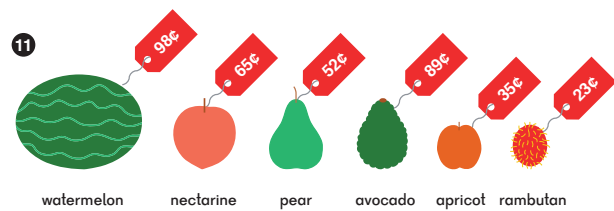
- 4 Which pictures show fourths?




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15-3 Practice

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- (a) Which fruit costs the most? **watermelon**
- (b) How much more does the watermelon cost than the pear? **46¢**
- (c) Fang buys the rambutan and the pear.
How much money does she spend? **75¢**
- (d) Josef buys 1 fruit with 2 quarters, a dime, and a nickel.
Which fruit did he buy? **Josef bought a nectarine.**
- 
- (e) Shanice buys 1 fruit with \$1 and gets 65¢ change.
Which fruit did she buy? **Shanice bought an apricot.**
- (f) Clara has 5 dimes.
She wants to buy a nectarine.
How much more money does she need? **Clara needs 15¢ more.**
- (g) Santino buys 2 fruits with 87¢.
Which fruits did he buy? **Santino bought a pear and an apricot.**

