

**(4) Subtract a number close to 100 from hundreds****Activity**

Write the following problems and discuss strategies for solving them mentally, using number bonds to illustrate the process, and 10x10 grids with extra unit squares.

$$\Rightarrow 100 - 98$$

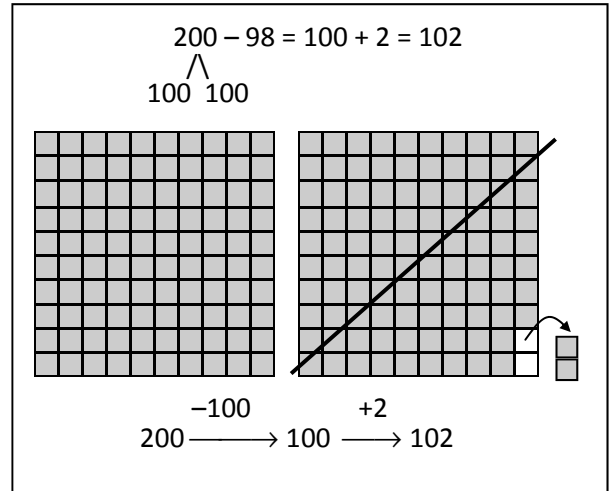
100 is just 2 more than 98.

$$100 - 98 = 2$$

$$\Rightarrow 200 - 98$$

We can subtract from 100 here as well. There is 1 less hundred, and 2 more.

Show two 10x10 grids. Ask your student what would happen if we took away 100 instead of 98. We would be taking away 2 too many. So we can subtract 100, and then add back in 2.



$$\Rightarrow 900 - 99$$

We can count back 100 and count on 1.

$$900 - 99 = 800 + 1 = 801$$

$$\Rightarrow 600 - 97$$

Ask your student what we need to add back in if we subtract 100. We can count back 100 and then count on 3.

$$600 - 97 = 500 + 3 = 503$$

$$\Rightarrow 300 - 92$$

We can count back 100 and add 8.

$$300 - 92 = 200 + 8 = 208$$

**Practice**

Tasks 5-6, p. 19

**Workbook**

Exercise 11, p. 24 (Answers p. 24)

**Reinforcement**

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5. 201

6. (a) 101 (b) 301 (c) 801  
(d) 602 (e) 402 (f) 702

## Chapter 2 – Writing Fractions

### Objectives

- ◆ Understand fractional notation.
- ◆ Identify fractions of a whole.
- ◆ Read and write fractions of a whole.
- ◆ Compare and order unit fractions.
- ◆ Make a whole with two or more fractions with the same denominator.

### Vocabulary

- |         |           |            |
|---------|-----------|------------|
| ◆ Third | ◆ Seventh | ◆ Tenth    |
| ◆ Fifth | ◆ Eighth  | ◆ Eleventh |
| ◆ Sixth | ◆ Ninth   | ◆ Twelfth  |

### Notes

In this chapter, students will learn how to represent the number of parts out of a total number of equal parts using fractions.  $\frac{1}{4}$  represents 1 out of 4 equal parts of the whole.  $\frac{3}{4}$  represents 3 out of 4 equal parts of the whole. The top number (numerator) counts the number of parts. The bottom number (denominator) tells us the number of parts the whole has been divided into.

Natural numbers count objects. The object being counted, such as apples or centimeters, is the denomination of the number. Fractions count *parts* of objects. The part from which the fraction is taken is called the *whole*. The whole for a fraction is like the denomination of a number. When we take three fourths of an apple, the whole is the apple, and the parts being counted are fourths. When we take three fourths of 12, the whole is 12, and the parts being counted are each a fourth of 12.

Fractions with a 1 in the numerator are called unit fractions. Students will learn that the more parts the whole is divided into, the smaller the part. So  $\frac{1}{6}$  is smaller than  $\frac{1}{4}$ . In some of the exercises, they will compare fractions other than unit fractions, but only when they have a picture where they can color in the fractions at this level. If there is no picture, the fractions will be unit fractions.

Make sure your student understands that when we compare fractions, we are comparing the fractions of the *same* whole. One sixth of a square is smaller than one half of the same square, but is not necessarily smaller than one half of another square.

At this level, students do not learn the terms *numerator* and *denominator*.

The lessons in this chapter are fairly short and easy, so you may want to combine several lessons.

### Material

- ◆ Fraction strips and circles Appendix p. a27-a30, 3 copies of each)
- ◆ Multilink cubes
- ◆ Index cards (for fraction cards, see lessons)

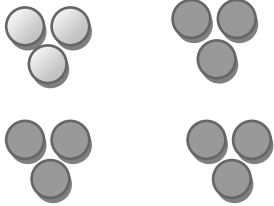
## (2) Identify the fraction of a set

### Activity

Give your student three counters of one color, such as green, and 9 of another color, such as blue. Ask your student how many counters he has. Ask him to group them by 3, putting all the green counters in one group. Then ask him what fraction of the counters are green. He may say three twelfths. Tell him that is correct, when we take the whole to be 12, and each equal part to be 1 out of the 12.

Ask your student how many equal parts there are. There are 4 equal parts. Tell her that since each part is equal, we can use the number of parts as the whole. 1 part has green counters. So 1 part out of 4 parts is green. We can say that one fourth of the counters are green.

Ask your student what fraction of the counters are blue. Guide him to say that three fourths of the counters are blue.



1 group of green counters  
4 groups of counters total

$\frac{1}{4}$  of the objects are green.

$\frac{3}{4}$  of the counters are blue.

### Discussion

Concept page 68

Tasks 8-14, pp. 71-72

Compare the answers for 11 and 12. Both are half, but the value for a half in each is different because the whole is different.

For task 13, ask, "If 2 dolls are one third of the total dolls, how can we find the total number of toys without counting or seeing a picture?" We know there are 3 equal groups, and that one out three has 2 toys. So we can multiply to find the total number:  $2 \times 3 = 6$ .

### Workbook

Exercise 7, p. 108

### Reinforcement

Give your student some counters, of which a fraction is a specific color. Ask him to make equal groups and then tell you the fraction that is that color, using the number of groups of the whole. For example, give him 20 counters of which 5 are yellow and the rest are any other colors and have him tell you what fraction are yellow.

### Enrichment

Give your student 12 counters and ask her to find  $\frac{1}{4}$  of the whole. Since the bottom number is 4, she needs to make 4 equal groups. Then,  $\frac{1}{4}$  of 12 is the number that is in each group, 3. Then ask her to find  $\frac{3}{4}$  of 12. This is the number in 3 of the 4 equal groups. Repeat with other examples, asking her to find the fraction of a whole using counters. Only use examples where the whole can be evenly divided by the number in the denominator.

8.  $\frac{1}{3}$
9.  $\frac{1}{4}$  are pink  
 $\frac{3}{4}$  are blue
10.  $\frac{2}{5}$  are yellow
11.  $\frac{1}{2}$  are apples  
5 apples
12.  $\frac{1}{2}$   
8
13. 2
14. 3