

# Additional Practice 6-2

## Estimate Decimal Quotients

### Another Look!

To estimate with decimal division, you can use rounding or compatible numbers.



Estimate  $28.4 \div 9.5$ .

### One Way

Use rounding. Round to the nearest whole number.

$$\begin{array}{r} 28.4 \div 9.5 \\ \downarrow \quad \downarrow \\ 28 \div 10 = 2.8 \end{array}$$

Write the original problem.  
Round 28.4 to 28.  
Round 9.5 to 10.

### Another Way

Use compatible numbers.

$$\begin{array}{r} 28.4 \div 9.5 \\ \downarrow \quad \downarrow \\ 27 \div 9 = 3 \end{array}$$

Write the original problem.  
Use compatible numbers.

**Leveled Practice** In 1 and 2, complete the work to estimate each quotient.

1. Estimate  $52.3 \div 11.4$  using rounding.

$$\begin{array}{r} 52.3 \div 11.4 \\ \downarrow \quad \downarrow \\ 52 \div 10 = \underline{5.2} \end{array}$$

2. Estimate  $52.3 \div 11.4$  using compatible numbers.

$$\begin{array}{r} 52.3 \div 11.4 \\ \downarrow \quad \downarrow \\ 55 \div 11 = \underline{5} \end{array}$$

In 3–11, estimate each quotient.

Exercises 3–11 have sample answers.

3.  $25.1 \div 8$

$24 \div 8 = 3$

4.  $59.67 \div 11.1$

$60 \div 10 = 6$

5.  $82.77 \div 7.5$

$80 \div 8 = 10$

6.  $496.3 \div 98$

$500 \div 100 = 5$

7.  $1.76 \div 0.91$

$2 \div 1 = 2$

8.  $13.07 \div 7.41$

$14 \div 7 = 2$

9.  $41.3 \div 6.76$

$42 \div 7 = 6$

10.  $81.4 \div 10.03$

$81 \div 10 = 8.1$

11.  $384.4 \div 88.1$

$360 \div 90 = 4$



- 12.** Ms. Barton and three neighbors purchased a snowblower to share. The snowblower cost \$439.20. Describe how you can estimate each person's share of the cost.

**Sample answer:** Using compatible numbers,  $440 \div 4 = 110$ , so each person would pay about \$110.

- 13.** Is 100 a reasonable estimate for  $915.25 \div 88.22$ ? Explain.

**No. Sample explanation:** Using compatible numbers,  $900 \div 90 = 10$ . The answer should be about 10, not 100.

- 14. Make Sense and Persevere** Hodi is building a birdhouse. Each of the four walls of the birdhouse needs to be 5.5 inches long. Hodi has a piece of board that is 24.5 inches long. Is the board long enough to be cut into the four walls of the birdhouse? Estimate using compatible numbers.

**Yes;  $24 \div 6 = 4$ .**

- 15.** On Monday, 3.11 inches of rain fell and on Tuesday, 0.81 inch of rain fell. On Wednesday, twice as much rain fell as on Tuesday. How much rain fell during the 3-day period?

**5.54 inches**

- 16. Number Sense** A veterinarian weighs three cats. The American Shorthair weighs 13.65 pounds. The Persian weighs 13.07 pounds, and the Maine Coon weighs 13.6 pounds. List the cats in order from least to greatest weight.

**Persian, Maine Coon, American Shorthair**

- 17. Higher Order Thinking** Use estimation to decide which is the better value: 12 pairs of socks for \$35.75 or 8 pairs of socks for \$31.15. Explain your answer.

**12 pairs of socks for \$35.75 is a better value. Sample explanation:** Using compatible numbers,  $36 \div 12 = \$3$  and  $32 \div 8 = \$4$



### Assessment Practice

- 18.** Elena wants to estimate  $197.6 \div 5.48$ . Which number sentence shows the best way to estimate this quotient?

- (A)  $100 \div 5 = 20$
- (B)  $100 \div 10 = 10$
- ☒ (C)  $200 \div 5 = 40$
- (D)  $200 \div 10 = 20$

- 19.** Connor cuts a board with a length of 78.5 centimeters into four equal pieces. Which is the best estimate for the length of each piece?

- (A) 2 cm
- (B) 5 cm
- ☒ (C) 20 cm
- (D) 25 cm