

### EXAMPLE 3 Inserting Zeros in the Dividend and the Quotient

Divide  $2.45 \div 0.007$ .

#### Study Tip

Remember to check your answer by multiplying the quotient by the divisor.

$$0.007 \overline{)2.450}$$

Multiply each number by 1000.  
Insert a zero in the dividend.

$$\begin{array}{r} 350 \\ 7 \overline{)2450} \\ \underline{-21} \phantom{0} \\ 35 \\ \underline{-35} \\ 00 \end{array}$$

Because  $0 \div 7 = 0$ ,  
insert a zero in the quotient.

So,  $2.45 \div 0.007 = 350$ .

#### On Your Own

Divide. Check your answer.

Now You're Ready  
Exercises 40–43

11.  $3.8 \div 0.16$

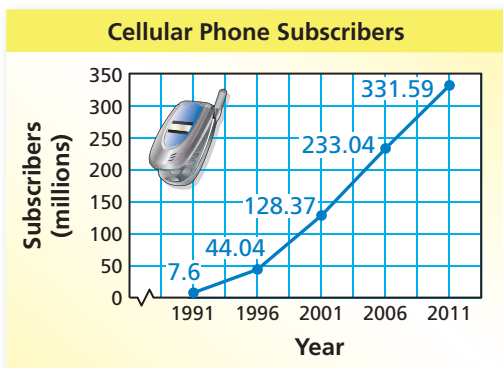
12.  $15.6 \div 0.78$

13.  $7.2 \div 0.048$

14.  $0.18 \div 0.003$

### EXAMPLE 4 Real-Life Application

How many times more cellular phone subscribers were there in 2011 than in 1991? Round to the nearest whole number.



From the graph, there were 331.59 million subscribers in 2011 and 7.6 million in 1991. So, divide 331.59 by 7.6.

**Estimate**  $320 \div 8 = 40$

$$7.6 \overline{)331.59} \longrightarrow \begin{array}{r} 43.6 \\ 76 \overline{)3315.9} \\ \underline{-304} \phantom{0} \\ 275 \\ \underline{-228} \\ 479 \\ \underline{-456} \\ 23 \end{array}$$

Rounds to 44.

So, there were about 44 times more subscribers in 2011 than in 1991.

**Reasonable?**  $44 \approx 40$  ✓

#### On Your Own

15. How many times more subscribers were there in 2006 than in 1996? Round to the nearest whole number.

## 2.6 Exercises

### Vocabulary and Concept Check

1. **NUMBER SENSE** Fix the one that is not correct.

$$\begin{array}{r} 6.1 \\ 4 \overline{)24.4} \end{array}$$

$$\begin{array}{r} 61 \\ 4 \overline{)244} \end{array}$$

$$\begin{array}{r} 6.1 \\ 4 \overline{)2.44} \end{array}$$

Copy the problem and place the decimal point in the correct location.

2.  $18.6 \div 4 = 465$

3.  $6.38 \div 11 = 58$

4.  $88.27 \div 7 = 1261$

Rewrite the problem so that the divisor is a whole number.

5.  $4.7 \overline{)13.6}$

6.  $0.21 \overline{)17.66}$

7.  $2.16 \overline{)18.5}$

### Practice and Problem Solving

Use base ten blocks to find the quotient.

8.  $3.6 \div 0.3$

9.  $2.6 \div 0.2$

10.  $0.72 \div 0.06$

11.  $0.36 \div 0.04$

Divide. Use estimation to check your answer.

12.  $6 \overline{)25.2}$

13.  $5 \overline{)33.5}$

14.  $7 \overline{)3.5}$

15.  $8 \overline{)10.4}$

16.  $38.7 \div 9$

17.  $37.6 \div 4$

18.  $43.4 \div 7$

19.  $25.6 \div 8$

20.  $44.64 \div 8$

21.  $0.294 \div 3$

22.  $3.6 \div 24$

23.  $64.26 \div 18$

**ERROR ANALYSIS** Describe and correct the error in finding the quotient.

24.

**X**

$$\begin{array}{r} 3.922 \\ 9 \overline{)28.008} \\ \underline{27} \phantom{00} \\ 100 \phantom{0} \\ \underline{81} \phantom{0} \\ 198 \phantom{0} \\ \underline{198} \\ 0 \end{array}$$

25.

**X**

$$\begin{array}{r} 0.86 \\ 6 \overline{)0.516} \\ \underline{48} \phantom{0} \\ 36 \phantom{0} \\ \underline{36} \\ 0 \end{array}$$

26. **TEXT MESSAGING** You send 40 text messages in one month. The total cost is \$4.80. How much does each text message cost?

27. **SUNBLOCK** Of the two bottles of sunblock shown, which is the better buy? Explain.



4-ounce  
bottle  
\$8.49

5-ounce  
bottle  
\$10.29