



## SKILL 20: Dividing a Whole Number by a Decimal

As illustrated below, you can multiply the dividend and divisor by the same nonzero number without changing the quotient.

$$\begin{array}{ccc}
 6 \div 3 = 2 & 15 \div 5 = 3 & 0.46 \div 2 = \mathbf{0.23} \\
 60 \div 30 = 2 & 1,500 \div 500 = 3 & 46 \div 200 = \mathbf{0.23} \\
 \begin{array}{c} \nearrow \\ 6 \times 10 \end{array} & \begin{array}{c} \nearrow \\ 15 \times 100 \end{array} & \begin{array}{c} \nearrow \\ 0.46 \times 100 \end{array} \\
 \begin{array}{c} \nwarrow \\ 3 \times 10 \end{array} & \begin{array}{c} \nwarrow \\ 5 \times 100 \end{array} & \begin{array}{c} \nwarrow \\ 2 \times 100 \end{array}
 \end{array}$$

To divide by a decimal, multiply both the dividend and the divisor by 10, 100, or 1,000 so that the divisor is a whole number. Then put the decimal point in the quotient and divide.

### Example

**Divide:  $63 \div 7.5$ .**

Multiply the dividend and divisor by 10 so the divisor is a whole number.

$$7.5 \overline{)63.0}$$

$$63 \div 7.5 = 8.4$$

Put the decimal point in the quotient.

$$75 \overline{)630.}$$

Divide.

$$\begin{array}{r}
 8.4 \\
 75 \overline{)630.0} \\
 \underline{600} \phantom{0} \\
 300 \\
 \underline{300} \\
 0
 \end{array}$$

Annex a zero.  
Divide until the remainder is zero.

### Guided Practice

Place the decimal point correctly in the quotient.

1.  $0.6 \overline{)12.0}$

2.  $0.5 \overline{)66.0}$

3.  $2.5 \overline{)16.00}$

4.  $0.48 \overline{)36.00}$

Divide.

5.  $0.6 \overline{)51}$

6.  $0.4 \overline{)7}$

7.  $2.9 \overline{)435}$

8.  $0.15 \overline{)126}$

**SKILL 20: Practice****Divide.**

1.  $0.6\overline{)87}$

2.  $0.06\overline{)87}$

3.  $0.3\overline{)9}$

4.  $0.03\overline{)9}$

5.  $0.2\overline{)57}$

6.  $0.8\overline{)10}$

7.  $0.09\overline{)18}$

8.  $0.04\overline{)13}$

9.  $0.24\overline{)168}$

10.  $1.2\overline{)15}$

11.  $0.61\overline{)61}$

12.  $0.35\overline{)98}$

13.  $771 \div 0.12$  \_\_\_\_\_

14.  $861 \div 8.4$  \_\_\_\_\_

15.  $364 \div 0.56$  \_\_\_\_\_

16.  $75 \div 0.025$  \_\_\_\_\_

**Solve. Refer to the table.**17. How many \$.33 stamps  
can you buy for \$33? \_\_\_\_\_18. How many \$.55 stamps  
can you buy for \$22? \_\_\_\_\_

19. a. What is the cost to mail a 3-ounce letter? \_\_\_\_\_

b. How many 3-ounce letters can you mail for \$8? \_\_\_\_\_

**Postal Rates for Letters**

1 ounce or less	\$ .33
Each additional ounce	\$ .22

20. Divide:  $162 \div 2.7$ .

A 600

C 6

B 0.6

D 60

Skill 20

21. Find the average: 6.7, 3, 8.6.

F 3

H 18.3

G 6.1

J 5.2

Skill 18