

## Checking Division with Multiplication

Multiplication and division “undo” one another. This means that when you ask yourself, “What is 12 divided by 3?” it is the same as asking, “What number *multiplied* by 3 gives 12?” You can use this method to catch mistakes in your division.

PROCEDURE: To check your division with multiplication, multiply the quotient of your division problem by the divisor and compare the result with the dividend. If they are equal, your division was correct.

SAMPLE PROBLEM 1: Divide 564 by 47, and check your result with multiplication.

Step 1: Divide to find your quotient.

$$\begin{array}{r} 12 \\ 47 \overline{)564} \\ \underline{-47} \phantom{0} \\ 94 \\ \underline{-94} \\ 0 \end{array}$$

Step 2: Multiply the quotient by the divisor.

$$\begin{array}{r} 12 \\ \times 47 \\ \hline 84 \\ 48 \phantom{0} \\ \hline 564 \end{array}$$

Step 3: Compare the product with your dividend.

$$564 = 564 \text{ Correct!}$$

### Check It Out!

Complete the following divisions, and check your math by multiplying the quotient by your divisor. Are the product and the dividend equal?

1.  $15 \overline{)405}$

\_\_\_\_\_

\_\_\_\_\_

quotient = \_\_\_\_\_

$$\begin{array}{r} \text{quotient} \\ \times \text{divisor} \end{array}$$

× \_\_\_\_\_

product = \_\_\_\_\_

2.  $14 \overline{)1694}$

\_\_\_\_\_

\_\_\_\_\_

quotient = \_\_\_\_\_

$$\begin{array}{r} \text{quotient} \\ \times \text{divisor} \end{array}$$

× \_\_\_\_\_

product = \_\_\_\_\_

3.  $12 \overline{)252}$

\_\_\_\_\_

\_\_\_\_\_

quotient = \_\_\_\_\_

$$\begin{array}{r} \text{quotient} \\ \times \text{divisor} \end{array}$$

× \_\_\_\_\_

product = \_\_\_\_\_