

## Dividing Whole Numbers with Long Division

**Long division**, which is used to divide numbers of more than one digit, is really just a series of simple division, multiplication, and subtraction problems. The number that you divide is called the *dividend*. The number you divide the dividend by is the *divisor*. The answer to a division problem is called a *quotient*.

SAMPLE PROBLEM: Divide 564 by 12, or  $12 \overline{)564}$ .

Step 1: Because you cannot divide 12 into 5, you must start by dividing 12 into 56. To do this, ask yourself, "What number multiplied by 12 comes closest to 56 without going over?"  $4 \times 12 = 48$ , so place a 4 in the quotient.

$$\begin{array}{r} 4 \\ 12 \overline{)564} \end{array}$$

Step 2: Multiply the 4 by the divisor and place the product under the 56. Then subtract that product from 56.

$$\begin{array}{r} 4 \\ 12 \overline{)564} \\ \underline{-48} \\ 8 \end{array}$$

Step 3: Bring the next digit down from the dividend (4), and divide this new number (84) by the divisor, as you did in Step 1. Because 12 divides into 84 seven times, write 7 in the quotient.

$$\begin{array}{r} 47 \\ 12 \overline{)564} \\ \underline{-48} \downarrow \\ 84 \\ \underline{-84} \\ 0 \end{array}$$

The quotient is 47.

### Divide It Up!

1. Fill in the blanks in the following long-division problems:

a. 
$$\begin{array}{r} \square 1 \\ 13 \overline{)663} \\ \square 5 \\ \square 3 \\ 1 \square \\ \square \end{array}$$

b. 
$$\begin{array}{r} 1 \square \square \\ 9 \overline{)918} \\ \square \\ 01 \\ \square \\ 1 \square \\ 18 \\ \square \end{array}$$

c. 
$$\begin{array}{r} 2 \square \\ 17 \overline{)408} \\ \square \square \\ 68 \\ \square 8 \\ \square \end{array}$$

2. Complete the following long-division problems on a separate sheet of paper:

a.  $3575 \div 11 =$  \_\_\_\_\_

b.  $52 \overline{)1664} =$  \_\_\_\_\_

c.  $3 \overline{)2940} =$  \_\_\_\_\_

d.  $4630 \div 5 =$  \_\_\_\_\_