



Name \_\_\_\_\_ Date \_\_\_\_\_

## Multiplying Decimals (pages 141–143)

When you multiply two decimals, there are two ways to place the decimal point in the product.

<b>Estimation</b>	<ul style="list-style-type: none"> <li>Estimate the product of two decimals by rounding the factors and then multiplying.</li> <li>Multiply the factors as with whole numbers.</li> <li>Use the estimate as a guide to placing the decimal in the product.</li> </ul>
<b>Counting Decimal Places</b>	<ul style="list-style-type: none"> <li>Multiply the decimal factors as if they were both whole numbers.</li> <li>The sum of the decimal places in the factors should equal the number of decimal places in the product. Annex zeros on the left if more decimal places are needed.</li> </ul>

### EXAMPLES

**Find the value of each expression.**

**A** Find  $2.9 \times 4.1$ .

$3 \times 4$  Round the decimals. Estimate the product; 12.

$$\begin{array}{r} 2.9 \\ \times 4.1 \\ \hline 29 \\ 116 \\ \hline 11.89 \end{array}$$

11.89 Use the estimate, 12, as a guide to placing the decimal. Place the decimal point after the 11.

**B** Find  $3.2 \times 5.7$ .

$3.2$  one decimal place  
 $\times 5.7$  one decimal place

$$\begin{array}{r} 3.2 \\ \times 5.7 \\ \hline 224 \\ 160 \\ \hline 18.24 \end{array}$$

18.24 There must be two decimal places in the product.

### Try These Together

**Multiply.**

1.  $\begin{array}{r} 7.6 \\ \times 2.3 \\ \hline \end{array}$

*HINT: Estimate the product. Then multiply as with whole numbers.*

2.  $\begin{array}{r} 0.52 \\ \times 2.6 \\ \hline \end{array}$

*HINT: Count the decimal places in the factors.*

### PRACTICE

**Multiply.**

3.  $0.52 \cdot 1.7$

4.  $6.6 \times 0.054$

5.  $2.73 \cdot 5.86$

**Solve each equation.**

6.  $k = 1.5 \cdot 6.4$

7.  $\ell = 0.9 \cdot 0.036$



**8. Standardized Test Practice** Multiply  $1.6 \times 0.023$ .

**A** 0.0368

**B** 0.368

**C** 3.68

**D** 36.8

Answers: 1. 17.48 2. 1.352 3. 0.884 4. 0.3564 5. 15.9978 6. 9.6 7. 0.0324 8. A