

9

Estimate the Product
by Rounding

Here's How

Estimate to find the product.

Round each factor to the place value of the first digit.

$$\begin{array}{r} 392 \longrightarrow 400 \quad 392 \text{ rounds to } 400. \\ \times 41 \longrightarrow \times 40 \quad 41 \text{ rounds to } 40. \end{array}$$

Look at the digit to the right of the first digit. 0, 1, 2, 3, and 4 round down. 5, 6, 7, 8, and 9 round up.

Now use the multiplying
by a multiple of
10 shortcut.

▶
$$\begin{array}{r} 400 \\ \times 40 \\ \hline 000 \end{array}$$
 Count the number of zeros in the factors.
There are 3 zeros. Write them in the answer.

$$\begin{array}{r} 400 \\ \times 40 \\ \hline 16,000 \end{array}$$
 Then, finish the multiplication.
 $4 \times 4 = 16$
Write the 16 in the answer.

The estimated product is 16,000.

Try These

Estimate to find each product.

Round to the greatest
place value of each digit.

▶ 1.
$$\begin{array}{r} 912 \longrightarrow \\ \times 71 \longrightarrow \\ \hline \end{array}$$

2.
$$\begin{array}{r} 567 \longrightarrow \\ \times 48 \longrightarrow \\ \hline \end{array}$$

3.
$$\begin{array}{r} 741 \longrightarrow \\ \times 71 \longrightarrow \\ \hline \end{array}$$

4.
$$\begin{array}{r} 816 \longrightarrow \\ \times 59 \longrightarrow \\ \hline \end{array}$$

Go Ahead

Estimate to find each product.

1.
$$\begin{array}{r} 449 \\ \times 32 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 126 \\ \times 94 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 815 \\ \times 65 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 717 \\ \times 56 \\ \hline \end{array}$$

5.
$$\begin{array}{r} 375 \\ \times 61 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 484 \\ \times 19 \\ \hline \end{array}$$

7.
$$\begin{array}{r} 285 \\ \times 74 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 635 \\ \times 72 \\ \hline \end{array}$$

9.
$$\begin{array}{r} 4284 \\ \times 57 \\ \hline \end{array}$$

10.
$$\begin{array}{r} 716 \\ \times 85 \\ \hline \end{array}$$

11.
$$\begin{array}{r} 2655 \\ \times 91 \\ \hline \end{array}$$

12.
$$\begin{array}{r} 926 \\ \times 88 \\ \hline \end{array}$$

13.
$$\begin{array}{r} 659 \\ \times 48 \\ \hline \end{array}$$

14.
$$\begin{array}{r} 3490 \\ \times 31 \\ \hline \end{array}$$

15.
$$\begin{array}{r} 791 \\ \times 39 \\ \hline \end{array}$$

16.
$$\begin{array}{r} 320 \\ \times 63 \\ \hline \end{array}$$

17.
$$\begin{array}{r} 288 \\ \times 89 \\ \hline \end{array}$$

18.
$$\begin{array}{r} 635 \\ \times 77 \\ \hline \end{array}$$

19.
$$\begin{array}{r} 6413 \\ \times 87 \\ \hline \end{array}$$

20.
$$\begin{array}{r} 891 \\ \times 47 \\ \hline \end{array}$$