

# Estimating Products and Quotients

You can use rounding or compatible numbers to estimate products and quotients.

## Rounding:

Round each factor to the nearest whole number and multiply.

$$\begin{array}{r} 4.287 \longrightarrow 4 \\ \times 2.804 \longrightarrow \times 3 \\ \hline \end{array} \quad 12 \text{ so, } 4.287 \times 2.804 \approx 12$$

## Compatible Numbers:

Find compatible numbers and divide.

$$\begin{array}{r} 16.173 \div 2.45 \\ \downarrow \quad \downarrow \\ 15 \div 3 = 5 \text{ so } 16.173 \div 2.45 \approx 5 \end{array}$$

Use rounding to estimate each answer.

1.  $3.73 \times 8.16$

2.  $35.518 \div 9.272$

3.  $7.349 \times 5.62$

4.  $4.178 \times 12.513$

5.  $8.498 \times 5.602$

6.  $24.534 \div 7.96$

7.  $41.01 \div 4.88$

8.  $15.812 \times 9.47$

9.  $2.81 \times 17.638$

Use compatible numbers to estimate each answer.

10.  $55.93 \div 8.34$

11.  $61.438 \div 8.72$

12.  $122.899 \div 5.36$

13.  $16.954 \div 3.5$

14.  $17.158 \times 8.99$

15.  $38.753 \div 8.461$

16.  $73.724 \div 16.1$

17.  $79.48 \div 8.512$

18.  $43.518 \div 8.043$

19. **Writing to Explain** Elena used rounding to estimate  $7.864 \times 3.29 \approx 24$ . Peter used rounding to estimate  $7.864 \times 3.29 \approx 32$ . Which student is correct? What mistake was made?

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