

MAIN IDEA

- Estimate products of fractions using compatible numbers and rounding.

BUILD YOUR VOCABULARY (page 115)

Compatible numbers are numbers that are easy to

EXAMPLES Estimate Using Compatible Numbers**1** Estimate $\frac{1}{5} \times 28$.

Find a multiple of 5 close to 28.

$$\frac{1}{5} \times 28 \longrightarrow \frac{1}{5} \times 30 \quad \text{30 and 5 are compatible numbers since } 30 \div 5 = 6.$$

$$\frac{1}{5} \times 30 = \boxed{} \quad 30 \div 5 = \boxed{}$$

$$\text{So, } \frac{1}{5} \times 28 \text{ is about } \boxed{}.$$

2 Estimate $\frac{3}{4} \times 17$.

Estimate $\frac{1}{4} \times 17$ first.

$$\frac{1}{4} \times 17 \longrightarrow \frac{1}{4} \times 16 \quad \text{Use 16 since 16 and 4 are compatible numbers.}$$

$$\frac{1}{4} \times 16 = \boxed{} \quad 16 \div 4 = \boxed{}$$

$$\text{If } \frac{1}{4} \text{ of 16 is } \boxed{}, \text{ then } \frac{3}{4} \text{ of 16 is } \boxed{} \times \boxed{} \text{ or } \boxed{}.$$

$$\text{So, } \frac{3}{4} \times 17 \text{ is about } \boxed{}.$$

WRITE IT

Which method would you use to estimate $\frac{1}{6} \times 19$, compatible numbers or rounding? Explain.

Check Your Progress Estimate each product.

a. $\frac{1}{4} \times 35$

b. $\frac{3}{7} \times 22$

REMEMBER IT

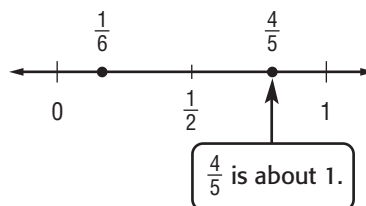
Placing fractions on a number line can help you round the fractions to estimate.

EXAMPLE Estimate by Rounding to 0, $\frac{1}{2}$, or 1**1** Estimate $\frac{4}{5} \times \frac{1}{6}$.

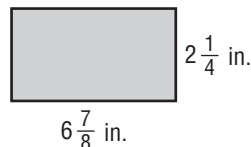
$$\frac{4}{5} \times \frac{1}{6} \rightarrow \boxed{} \times \frac{1}{6}$$

$$\boxed{} \times \frac{1}{6} = \frac{1}{6}$$

So, $\frac{4}{5} \times \frac{1}{6}$ is about $\boxed{}$.

**Check Your Progress** Estimate $\frac{1}{9} \times \frac{7}{8}$.
EXAMPLE Estimate With Mixed Numbers**4 MEASUREMENT** Estimate the area of the rectangle.

Round each mixed number to the nearest whole number.

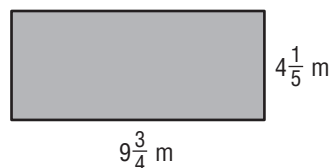


Round $6\frac{7}{8}$ to $\boxed{}$.

$$2\frac{1}{4} \times 6\frac{7}{8} \rightarrow \boxed{} \times \boxed{} = 14$$

Round $2\frac{1}{4}$ to $\boxed{}$.

So, the area is about $\boxed{}$ square inches.

Check Your Progress **MEASUREMENT** Estimate the area of the rectangle.**HOMEWORK ASSIGNMENT**

Page(s):

Exercises: