

Multiplying Mixed Numbers

MAIN IDEA

- Multiply mixed numbers.

EXAMPLE Multiply a Fraction and a Mixed Number

1 Find $\frac{1}{3} \times 6\frac{3}{7}$.

Estimate Use compatible numbers $\rightarrow \frac{1}{3} \times \square = \square$

$$\frac{1}{3} \times 6\frac{3}{7} = \frac{1}{3} \times \square$$

Write $6\frac{3}{7}$ as \square .

$$= \frac{1 \times \overset{15}{\cancel{45}}}{\underset{1}{\cancel{3}} \times 7}$$

Divide 45 and 3 by their GCF, 3.

$$= \square$$

$$\text{or } \square$$

Simplify. Compare to the estimate.

Check Your Progress

Find $\frac{1}{4} \times 4\frac{2}{5}$.

KEY CONCEPT

Multiplying Mixed Numbers To multiply mixed numbers, write the mixed numbers as improper fractions and then multiply as with fractions.

EXAMPLE Multiply Mixed Numbers

1 **DISTANCES** Belinda lives $1\frac{1}{2}$ times farther from school than Jamie does. If Jamie lives $4\frac{1}{5}$ miles from school, how far from school does Belinda live?

Jamie lives $4\frac{1}{5}$ miles from school. Multiply $4\frac{1}{5}$ by $1\frac{1}{2}$.

$$4\frac{1}{5} \times 1\frac{1}{2} = \square \times \square$$

First, write mixed numbers as improper fractions.

$$= \frac{\square}{\square}$$

Then, multiply the numerators and the denominators.

$$= \square \text{ or } \square$$

Simplify.

Belinda lives \square miles from school.

Check Your Progress

WEIGHT A bag of marbles weighs $3\frac{1}{4}$ times as much as a bag of pretzels. If the bag of pretzels weighs $1\frac{1}{3}$ pounds, how much does the bag of marbles weigh?

EXAMPLE**Evaluate Expressions**

1 ALGEBRA If $r = 3\frac{3}{4}$ and $s = 2\frac{4}{5}$, what is the value of rs ?

$$rs = \boxed{} \times \boxed{}$$

Replace r with $\boxed{}$ and

s with $\boxed{}$.

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

Divide the numerator and

denominator by $\boxed{}$ and by $\boxed{}$.

$$= \boxed{} \text{ or } \boxed{}$$

Simplify.

Check Your Progress

ALGEBRA If $m = 2\frac{5}{8}$ and $n = 4\frac{4}{7}$, what is the value of nm ?

HOMEWORK ASSIGNMENT

Page(s):

Exercises: