

SECTION
4B

Ready to Go On? Skills Intervention

4-4 Multiplying Fractions and Mixed Numbers

When multiplying fractions, first multiply the numerators and then multiply the denominators. Remember to first change mixed numbers to improper fractions. Write all answers in simplest form.

Multiplying Fractions

Multiply. Write each answer in simplest form.

A. $-3 \cdot \frac{5}{9}$

$$-3 \cdot \frac{5}{9} = \frac{-3}{1} \cdot \frac{5}{9}$$

$$= \frac{-3 \cdot 5}{9}$$

$$= \frac{-15 \div 3}{9 \div 3}$$

$$= -\frac{5}{3}$$

$$= -1\frac{2}{3}$$

What numbers are multiplied to get the numerator?

What numbers are multiplied to get the denominator?

What number divides evenly into both the numerator and the denominator?

Is the numerator greater than the denominator? A. _____ B. _____

Write the answer in simplest form.

B. $\frac{7}{9} \cdot -\frac{5}{11}$

$$\frac{7}{9} \cdot -\frac{5}{11} = \frac{7}{9} \cdot \frac{-5}{11}$$

$$= \frac{7 \cdot 5}{9 \cdot 11}$$

$$= -\frac{35}{99}$$

$$= -\frac{35}{99}$$

$$= -\frac{35}{99}$$

Multiplying Mixed Numbers

Multiply. Write each answer in simplest form.

A. $\frac{6}{7} \cdot 5\frac{2}{3}$

$$\frac{6}{7} \cdot 5\frac{2}{3} = \frac{6}{7} \cdot \frac{17}{3}$$

$$= \frac{6 \cdot 17}{7 \cdot 3}$$

$$= \frac{102 \div 3}{21 \div 3}$$

$$= \frac{34}{7}$$

$$= 4\frac{6}{7}$$

Write each mixed number as an improper fraction.

What numbers are multiplied to get the numerator and denominator?

Do the numerator and denominator have a greatest common divisor?

A. _____ B. _____

Is the numerator greater than the denominator? A. _____ B. _____

Write the answer as a mixed number.

B. $2\frac{3}{14} \cdot 1\frac{3}{4}$

$$2\frac{3}{14} \cdot 1\frac{3}{4} = \frac{31}{14} \cdot \frac{7}{4}$$

$$= \frac{31 \cdot 7}{14 \cdot 4}$$

$$= \frac{217}{56}$$

$$= \frac{217 \div 7}{56 \div 7}$$

$$= \frac{31}{8}$$

$$= 3\frac{7}{8}$$