

# Chapter 5 Fraction Operations

## 5.3 Multiplying Fractions and Mixed Numbers

Pages 232-236

## NOTES (5.3) Multiplying Fractions and Mixed Numbers

\*Key Concept p. 232\*

p. 253

$$5) 45 \cdot \frac{4}{5} = \frac{45}{1} \cdot \frac{4}{5} = \frac{45 \cdot 4}{5} = \frac{180}{5}$$

$$\frac{180 \div 5}{5 \div 5} = \frac{36}{1} = \textcircled{36}$$

$$\begin{array}{r} 36 \\ 5 \overline{) 180} \\ \underline{15} \phantom{0} \\ 30 \\ \underline{30} \\ 0 \end{array}$$

$$\begin{array}{r} 45 \\ 4 \\ \hline 180 \end{array}$$

**\*Before multiplying fractions & mixed numbers  
reduce by dividing out common factors from  
opposite numerators and denominators before  
solving**

$$5) 45 \cdot \frac{4}{5} = \frac{\overset{9}{\cancel{45}}}{1} \cdot \frac{4}{\underset{5}{\cancel{5}}} = \frac{9 \times 4}{1 \times 1} = \frac{36}{1}$$

$\textcircled{36}$

**Do # 4-16 even like this**

$$5) \frac{2}{5} \times \frac{1}{9} = \frac{2 \cdot 1}{5 \cdot 9} = \frac{2}{45}$$

$$13) 4\frac{1}{8} \times \frac{2}{11}$$

$$\frac{4 \times 8 \oplus 1}{8} \times \frac{2}{11}$$

$$3 \frac{33}{8} \times \frac{2}{11} = \frac{3 \cdot 1}{4 \cdot 1} = \frac{3}{4}$$

$$15) 1\frac{2}{5} \times 4\frac{2}{7}$$

$$\frac{1 \times 5 \oplus 2}{5} \times \frac{4 \times 7 \oplus 2}{7}$$

$$1 \frac{7}{5} \times \frac{30}{7} = \frac{1 \cdot 6}{1 \cdot 1} = \frac{6}{1} = 6$$

**Do # 24-28 even like this**

$$25) 1\frac{3}{4} \left( \frac{1}{8} + \frac{3}{4} \right)$$

$$1\frac{3}{4} \left( \frac{1}{8} + \frac{6}{8} \right)$$

$$\frac{7}{4} \times \frac{7}{8} = \frac{7 \cdot 7}{4 \cdot 8} = \frac{49}{32} = 1\frac{17}{32}$$

**Do # 4-16 even like this**

$$27) \left( \frac{9}{10} - \frac{1}{4} \right) \cdot 2 \frac{7}{10}$$
$$\left( \frac{9}{16} - \frac{4}{16} \right) \cdot \frac{27}{10}$$

$$1 \frac{\cancel{2}}{16} \cdot \frac{27}{\cancel{10}_2} = \frac{1 \cdot 27}{16 \cdot 2} = \frac{27}{32}$$

**#44 = 1 pt**

**#46 = 2 pts**