

## 2.1 Multiplying Fractions

EQ: How do you multiply fractions?

$$\frac{2}{5} \quad \leftarrow \text{numerator}$$

$$5 \quad \leftarrow \text{denominator}$$

★ You do not need to find a common denominator to multiply fractions.

★ You multiply straight across

★ Cross simplify, if needed

Example 1:  $\frac{1}{5} \times \frac{1}{3} = \frac{1 \times 1}{5 \times 3} = \frac{1}{15}$

Example 2:  $\frac{3}{7} \times \frac{1}{2} = \frac{3 \times 1}{7 \times 2} = \frac{3}{14}$

Example 3:  $\frac{8^2}{9^3} \times \frac{3^1}{4^1} = \frac{2}{3} \times \frac{1}{1} = \frac{2}{3}$

Example 4:  $\frac{1}{2} \times 2\frac{3}{4} = \frac{1}{2} \times \frac{11}{4} = \frac{1 \times 11}{2 \times 4} = \frac{11}{8}$

$2 \times 4 = 8$   
 $8 + 3 = 11$

$$\begin{array}{r} 1\frac{3}{4} \\ 8 \overline{) 11} \\ \underline{8} \phantom{0} \\ 3 \phantom{0} \end{array}$$

$$\frac{11}{8} \text{ or } 1\frac{3}{8}$$

Summary