

## 7.2 Multiplying Fractions

Factor

- Something that is part of a multiplication problem

$$7x = 56$$

Rule -

$$\frac{a}{b} \cdot \frac{c}{d} = \frac{a \cdot c}{b \cdot d}$$

$$\text{Product of Fractions} = \frac{\text{Product of Numerators}}{\text{Product of Denominators}}$$

$$\frac{7}{8} \cdot \frac{3}{4} = \frac{7 \cdot 3}{8 \cdot 4} = \frac{21}{32}$$

$$\frac{2}{11} \cdot \frac{2}{35} = \frac{2 \cdot 2}{1 \cdot 7} = \frac{4}{7}$$

Simplify before you multiply

$$x = \frac{4}{9}$$

$$\frac{2}{3} \cdot x$$

$$\frac{2}{3} \cdot \frac{4}{9} = \frac{8}{27}$$

~~$$\frac{8}{27}$$~~

Why is the product smaller than the factor

$$\frac{7}{9} \cdot \frac{1}{5} = \frac{7}{45}$$

< 1 it decreases

= 1 it stays the same

> 1 it increases

~~$$\frac{1}{2} \times \frac{1}{4} \times \frac{1}{5}$$~~

$$\frac{1}{2} \times \frac{1}{2} \times \frac{1}{5}$$

$$\frac{1}{4} \times \frac{1}{5} = \frac{1}{20}$$

$$\frac{1}{2} \times 1 \times \frac{1}{9} = \frac{1}{18}$$

~~$\frac{1}{2}$~~   ~~$\times$~~   ~~$\frac{1}{2}$~~   ~~$\times$~~   ~~$\frac{1}{9}$~~

$$\frac{3}{5} \cdot \frac{1}{2} < 1$$

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

$$1 = 1.0 = \frac{1}{1} = 100\%$$

¶ 351-352  
 2-48 even