

1/11/10

Objective:

TSWBAT multiply two fractions and  
fractions by whole numbers



## Modeling Fraction Multiplication

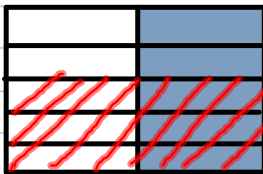
Draw a model to find the product  $\frac{3}{5} \times \frac{1}{2}$

1. Divide a rectangle in half and shade one of the halves.



The shape to the left represents  $\frac{1}{2}$

2. Divide each half into fifths.



Use diagonal lines to shade 3 of the fifths.

The overlapping area represents the numerator of your answer and the total number of boxes represents the denominator.

$$\frac{3}{5} \times \frac{1}{2} = \frac{3}{10}$$

## Multiplying Fractions

$$\frac{3}{8} \times \frac{2}{5}$$

1. Multiply the numerators.

$$3 \times 2 = 6 \quad \frac{6}{40}$$

2. Multiply the denominators.

$$8 \times 5 = 40 \quad \frac{6}{40}$$

3. Simplify.

$$\frac{6}{40} = \frac{3}{20}$$

## Multiplying Fractions by Whole Numbers

Find  $\frac{3}{4}$  of 20.

1. Turn the whole number into a fraction.

$$20 = \frac{20}{1}$$

2. Simplify by cross canceling.

$$\frac{3}{4} \times \frac{\cancel{20}^5}{1}$$

3. Multiply the numerators.

$$3 \times 5 = 15 \quad \frac{15}{1} = 15$$

4. Multiply the denominators.

$$1 \times 1 = 1$$

Practice:

①  $\frac{1}{4} \times \frac{1}{3} =$

②  $\frac{5}{11} \times \frac{2}{7}$

③  $\frac{11}{14} \times 28$

④  $\frac{7}{9}$  of 21

**Homework:**  
**Practice 5-1**

