Key

Vocabulary
In mathematics, operations that follow the **Commutative** can be performed in any order.

(Which **operations** would this property work for?)

addition $2+4=6$ mult. $2 \times 3 = 6$
             $4+2=6$ $3 \times 2 = 6$

(Which **operations** would this property NOT work for?)

subtraction $5-4=1$ division $6 \div 2 = 3$
                $4-5=1$ $2 \div 6 = 1/3$

Draw a line to "Commutative" if the examples can be done in either order. Draw a line to "Not Commutative" if the order changes the outcome.

(order doesn't matter)

Commutative	$12 \div 6; 6 \div 12$
	tying your left shoe; tying your right shoe
	$5 \times 7; 7 \times 5$
Not Commutative	play a soccer game; change into your team uniform
	$15 + 5; 5 + 15$

Rules
1.) Turn the whole number into a fraction. (Put it over __1__).

2.) Multiply the __numerators__.

3.) Multiply the __denominators__.

4.) Simplify, if needed.

Guided Practice: Multiply. Write in simplest form.

1.) $10 \times \dfrac{4}{5}$

$$\frac{10}{1} \times \frac{4}{5} = \frac{40}{5}$$

$\boxed{8}$

2.) $2 \times \dfrac{3}{4}$

$$\frac{2}{1} \times \frac{3}{4} = \frac{6}{4}$$

$1\frac{2}{4} = \boxed{1\frac{1}{2}}$

3.) $\dfrac{3}{8} \times 11$

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

$\boxed{4\frac{1}{8}}$

4.) $\dfrac{3}{7} \times 9$

$$\frac{3}{7} \times \frac{9}{1} = \frac{27}{7}$$

$\boxed{3\frac{6}{7}}$

5.) A cat spends 2/3 of its life asleep. If a cat lives to be 15, how many years did it spend asleep?

$$\frac{2}{3} \times 15 = \frac{2}{3} \times \frac{15}{1} = \frac{30}{3} = \boxed{10 \text{ years}}$$

Building on Essential Question – How is the process used to multiply a fraction and whole number similar to the process used to multiply two whole numbers?

To multiply a fraction by a whole number, you multiply straight across – just like with whole numbers.

Rate Yourself – Are you ready to move on? Shade the section that applies.