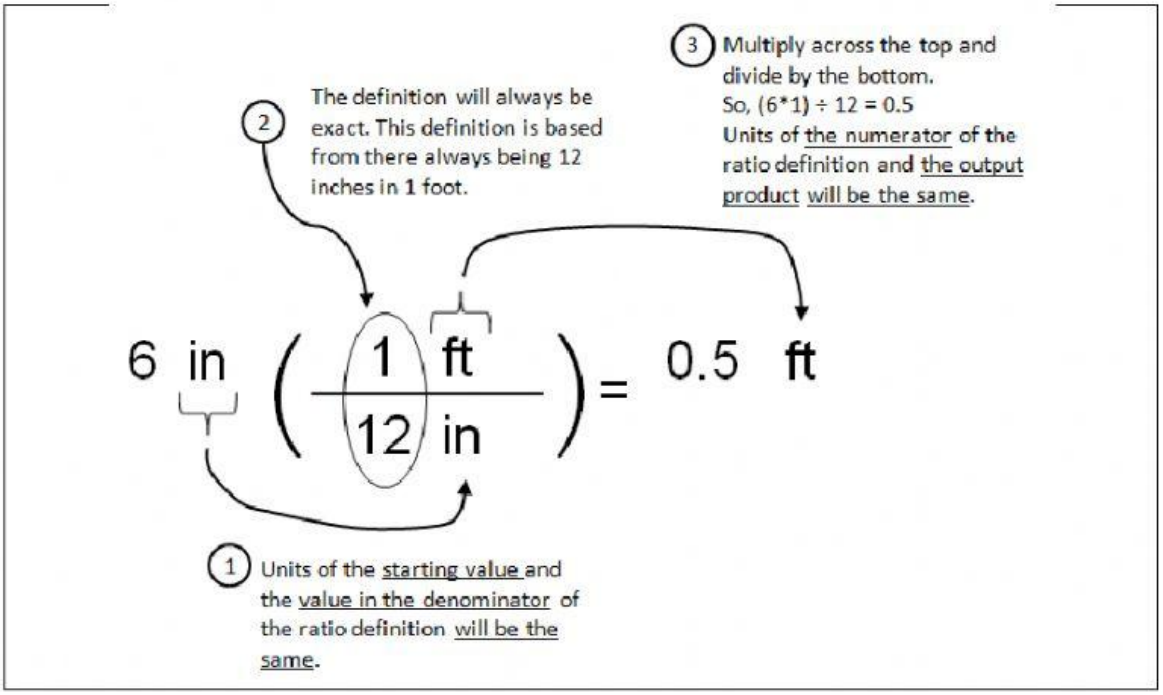
Name:_____

Conversions: It's as easy as 1, 2, 3!

Example:



Exercises: The following conversions are partially set up using the conversion template. Fill in the blanks where needed. Maintain the correct number of significant figures.

1) There are four cups in one quart. If there are 28 cups, how many quarts is that?

$$28\ cups\left(\frac{quart}{cups}\right) = \qquad quarts$$

2) In 1 US pint, there are 473.18 milliliters (rounded). If a patient had 2.00 pints of blood withdrawn, how many milliliters is that?

$$pints\left(\frac{473.18\ milliliters}{1\quad pints}\right) =$$

Don't forget units in the output!

3) In 1 kilogram, there are 2.20 pounds. What would be the weight of a person who is 170 lbs in kilograms?

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$$170\ lbs\left(\frac{\qquad\qquad}{\qquad\qquad}\right) = \qquad\qquad kilograms$$

4) a. In Canada, all the speed limits are posted in kilometers per hour (km/hr). If the speed limit is set at 45 km/hr, what would you need to adjust the speedometer reading to measure? There are 1.61 kilometers (rounded) in a mile.

$$\frac{45\ km}{hr}\left(\frac{\qquad\qquad}{\qquad\qquad}\right) = \frac{\qquad\qquad miles}{hr}$$

Note: just because the hour unit is on the bottom, you don't have to do anything different with the conversion.

b. If one was travelling at 35 miles per hour at the posted speed limit in part a, could this result in being pulled over by the Canadian police?

5) a. Suppose a truck was carrying 10.00 short tons (just fyi: a short *English* ton is 2000 lbs). There are 1.102 metric tons in a short ton. How many metric tons are on the truck?

b. If the limit for a truck to cross into Canada is 11.00 metric tons, would the truck in part 11a be allowed to cross the border? Just Yes or No answer.

Conversions need to be raised to the power with which the measurement is given. For example, if a volume of 0.326 m^3 is converted to centimeters, it needs to be raised to the 3rd power:

$$0.326\ m^3\left(\frac{100\ \ cm}{1\ \ m}\right)^3 = \quad 3.26 \times 10^5\ \ cm^3$$

6) How many square meters are in 45.7 cm^2? Note: you will need to raise this conversion to the power of something.

$$45.7\ cm^2\left(\frac{\qquad m}{cm}\right) =$$

Be sure to show correct units!

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