

## Stick Quiz

### Write an algebraic expression

1. the difference between a number times by itself five times and the quotient between one and three.
2. four times the quantity of the square of  $v$  plus 3.  $x^5 - (1/3)$   
 $4(v^2 + 3)$

### Write a verbal expression for

3.  $6m - 3$
4.  $2c^2 + d$
5. Mechanical pencils sell for \$0.79 each, and pens sell for \$0.89 each. Write an expression for the cost of  $m$  pencils and  $p$  pens.  $0.79m + 0.89p$



**I can...** use dimensional analysis to convert from one unit to another.



**NEED TO KNOW!!!***You will Use them  
in Chemistry!*

$$1 \text{ yr} = 365 \text{ days}$$

$$1 \text{ day} = 24 \text{ hrs}$$

$$1 \text{ wk} = 7 \text{ days}$$

$$1 \text{ hour} = 60 \text{ min}$$

$$1 \text{ min} = 60 \text{ sec}$$

$$1000 \text{ mL} = 1 \text{ L}$$

$$1000 \text{ mg} = 1 \text{ g}$$

$$1000 \text{ mm} = 1 \text{ m}$$

$$100 \text{ cm} = 1 \text{ m}$$

$$1 \text{ cm}^3 = 1 \text{ mL}$$

$$1 \text{ kg} = 1000 \text{ g}$$

$$5280 \text{ ft} = 1 \text{ mile}$$

$$1 \text{ kg} = 2.2 \text{ lbs}$$

What is....

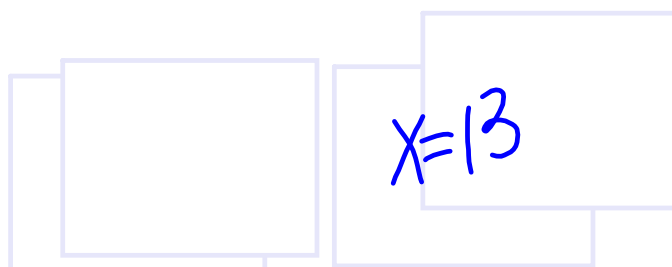
$$\frac{1 \cancel{5}}{1 \cancel{5}} = 1$$

$$\frac{1 \cancel{X}}{1 \cancel{X}} = \frac{13}{13} = 1$$

$$\frac{1 \cancel{\heartsuit}}{1 \cancel{\heartsuit}} = 1$$

$$\frac{\cancel{\text{min}}}{\cancel{\text{min}}} = 1$$

$$\frac{\cancel{\text{grams}}}{\cancel{\text{grams}}} = 1$$



What about.....

$$\frac{\cancel{5}}{1} \cdot \frac{1}{\cancel{5}} = \frac{1}{1} = 1$$

$$\frac{3\cancel{\heartsuit}}{1} \cdot \frac{1}{\cancel{\heartsuit}} = \frac{3}{1} = 3$$

$$\frac{\cancel{2} \text{ grams}}{1} \cdot \frac{1}{\cancel{\text{grams}}} = \underline{\underline{2}}$$

1. 2 L = \_\_\_\_\_ mL

Start with whats given and put a 1 under it!

$$\frac{\cancel{2} \text{ L}}{1} \cdot \frac{1000\cancel{\text{mL}}}{1\cancel{\text{L}}} = \frac{2000\text{mL}}{1}$$

$$= 2000\text{mL}$$

$$1 \text{ L} = 1000\text{mL}$$

$$\frac{1 \text{ L}}{1000\text{mL}} \quad \frac{1000\text{mL}}{1 \text{ L}}$$

2. 3 weeks = \_\_\_\_\_ days

$$\frac{\cancel{3 \text{ weeks}}}{1} \cdot \frac{7 \text{ days}}{\cancel{1 \text{ week}}} = \frac{3 \cdot 7 \text{ days}}{1} = 21 \text{ days}$$

3. 50 mm = \_\_\_\_\_ cm

\*More than one Conversion needs to happen\*

$$\frac{\cancel{50 \text{ mm}}}{1} \cdot \frac{\cancel{1 \text{ m}}}{\cancel{1000 \text{ mm}}} \cdot \frac{100 \text{ cm}}{\cancel{1 \text{ m}}}$$

$$\frac{50 \cdot 100 \text{ cm}}{1000} = \frac{\cancel{5000} \text{ cm}}{\cancel{1000}} = 5 \text{ cm}$$

You Try!

4. 67,900 g = \_\_\_\_\_ kg

5. 2 years = \_\_\_\_\_ minutes

$$\frac{2 \text{ yrs}}{1} \cdot \frac{365 \text{ days}}{1 \text{ yr}} \cdot \frac{24 \text{ hrs}}{1 \text{ days}} \cdot \frac{60 \text{ min}}{1 \text{ hrs}} = \frac{1,051,200}{1} \text{ min}$$

### What if there is 2 units!

6. 15 meters/<sup>per</sup>minute = \_\_\_\_\_ cm/s

$$\frac{15 \text{ m}}{1 \text{ min}} \cdot \frac{100 \text{ cm}}{1 \text{ m}} \cdot \frac{1 \text{ min}}{60 \text{ sec}} = \frac{1500 \text{ cm}}{60 \text{ sec}}$$

$$= \frac{25 \text{ cm}}{1 \text{ sec}}$$

$$25 \text{ cm/s}$$

$$5280 \text{ ft} = 1 \text{ mile}$$

7. 1100 feet per second into miles per hour

You Try!!

$$1 \text{ kg} = 2.2 \text{ lbs}$$

8. 721 lbs per week into kg per second



Homework 2.8

Dimensional Analysis

Worksheet Day 1