Name _____ Hour _____

Math and Conversion Review for Ch. 1 Quiz

Know the following **conversion factors**:

1 km = _____ m   1 m = _____ cm   1 in = _____ cm   1 mile = _____ m

      1 kg = _____ g   1 kg = _____ lbs   1 L = _____ mL

Put the following numbers in **scientific notation**:

    454 _____   0.000678 _____

Expand the following numbers:

    3.41×10^{-3} _____ 8.341×10^{3} _____

Perform the following **conversions**: (Show your work!)

1. 7.4 miles = _____ m

2. 165 lbs = _____ kg

3. 3.2 m^2 = _____ cm^2

4. 67 mph = _____ m/s

5. 24 m/s = _____ mph

Solve the following equations for x:

6. $\dfrac{4x}{10} = \dfrac{5}{3}$ 7. $4x^2 = 400$

8. $\dfrac{1}{2} = \dfrac{1}{3} + \dfrac{1}{x}$ 9. $\dfrac{8}{x} = 3a$

Name _____ Hour _____

Graphing:

10. Graph the following points:

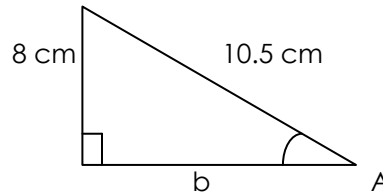| x	y
2	6
4	10
6	14
8	18

11. Calculate the slope of the line.

12. Find the equation of the line. (y = mx + b form)

Use the **triangle** below to answer the following questions:

13. Find the length of side b.

14. Find angle A in degrees

8 cm   10.5 cm

b   A

Playing With Cars Lab:

15. On the distance vs. time graph for the car that moved at constant speed:

   a. What are the units for the slope? _____

   b. What does the slope represent? _____

16. What is the **unit** for distance we used? _____ time? _____ speed? _____

17. If you were to get a curved line on a distance vs. time graph, what would the car be doing?

18. Sketch a **speed vs. time** graph for the car moving at constant speed. What did the **area** under the graph give you? **Show how the units cancel out.**
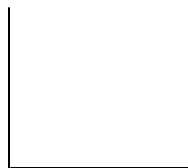
19. Sketch a **speed vs. time** graph and put **3 lines** on it: one that represents an object moving at constant speed, one that is accelerating, and one that is decelerating. **Label** each line!