

Name _____ Hour _____

Math and Conversion Review for Ch. 1 Quiz

If you scored an 18 or higher on the Math pretest, you only need to complete #16-20. I suggest you try any of the math review that you got wrong on the pretest though!

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 1 hour = _____ sec

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

6. 5.67 ft = _____ m

Solve the following equations for x:

7. $\frac{4x}{10} = \frac{5}{3}$

9. $4x^2 = 400$

8. $\frac{1}{2} = \frac{1}{3} + \frac{1}{x}$

10. $\frac{8}{x} = 3a$

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Graphing:

11. Graph the following points:

x	y
2	6
4	10
6	14
8	18

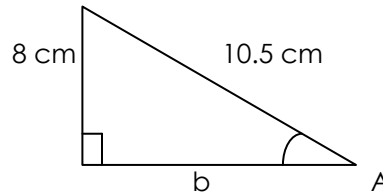


12. Calculate the slope of the line.

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

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

14. Find the length of side b.



15. Find angle A in degrees

Playing With Cars Lab:

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

- a. What were the units for the slope? _____
- b. What did the slope represent? (think rise/run) _____

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

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

19. Sketch a **speed vs. time** graph for a car moving at a constant speed of 20 m/s for 4 sec.

Calculate the **area** under the graph. Determine what **unit** the area is measured in. **If you are unsure...multiply the units of the area to see what is left.**



The area is _____. The unit is _____

20. 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 (slowing down). **Label** each line!

