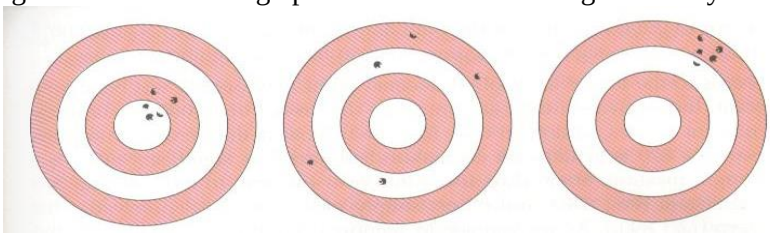
Name: _____ Period: _____

Chapter 1-3 Review

1. Label these diagrams with low or high precision and low and high accuracy.



A._____B._____ C. _____

2. Define the 5 branches of chemistry in your own words:

a. _____- _____

b. _____- _____

c. _____- _____

d. _____- _____

e. _____- _____

3. What measurements are indicated by the following units? Choices are in the last column.

a. g/mL _____ e. cm^3 _____ i. g/cm^3 _____

b. s _____ f. mm _____

c. km _____ g. mg _____

d. g _____ h. L _____

density
length
mass
time
volume

4. Put these in order from smallest to biggest: m, cm, Km, mm
_____ → _____ → _____ → _____

5. Classify the following properties as physical (P) or chemical (C).

____ a. Color ____ c. Density ____ e. Flammability ____ b. Acid resistant ____ d. Odor

6. Classify the following changes as physical (P) or chemical (C).

____ a. wood burning ____ b. sugar dissolving in water ____ c. baking a lasagna

____ d. dyeing your hair ____ e. tearing magnesium ribbon ____ f. a person cools by sweating

7. Classify each as an element, compound, homogeneous mixture, or heterogeneous mixture:

____ a. CO_2 ____ b. Hot chocolate w/ marshmallows ____ c. Lithium

____ d. Jello ____ e. Sucrose ($C_{12}H_{22}O_{11}$) ____ f. Blood

____ g. Air ____ h. A solution of KI ____ i. Nitrogen (N_2)

8. In order to be a pure substance it has to be either an _____ or a _____.

9. In your own words, explain the law of conservation of mass.

10. What is the difference between quantitative and qualitative?

11. Determine the number of significant figures in each of the following measurements.

a) 3427 _____ b) 0.00456 _____ c) 123,453_____

d) 172 _____ e) 0.000984 _____ f) 0.502 _____

g) 3100.0 _____ h) 0.0114 _____ i) 107.2 _____

12. Addition and subtraction – answer is expressed to the same number of significant digits as the number in the calculation with the fewest digits to the right of the decimal point
*rounding →0-4 round down, 5-9 round up
Example:
10.6871 (4 sig figs to the right of the decimal)
+1.42 (2 sig figs to the right of the decimal)
12.1071 = 12.11 (2 sig figs to the right of the decimal)

a) 4.53 b) 5.65123
+ 2.2 - 4.632

13. Multiplication or Division - the answer is expressed to the same number of significant digits as the number with the fewest significant digits

2.34	×	3.225	= 7.5465	=	7.55
3 sig figs		4 sig figs			3 sig figs

a. 3.95 / 1.5 = _____ b. (3.5)(6.456) = _____

14. Write the density formula 3 different ways.

My teacher has gone over this review with me, and I will do better than before.

Signed _____