

**Summer Review****Station 1****(Ch 1) - MEASUREMENTS**

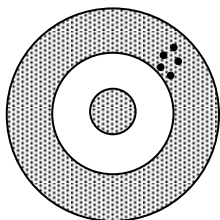
Write in the number of significant figures for each of the following measurements:

\_\_\_ 3.00 mL    \_\_\_ 0.00290 g    \_\_\_ 50.00 m    \_\_\_ 0.070 kg    \_\_\_ 400 L

Combine the masses 0.0562 kg, 124.213 g and 1635 mg. The answer should be reported as: \_\_\_\_\_ g

A 5.75 mL sample of mercury has a measured mass of 77.05 g. The density is \_\_\_\_\_

Mercury's accepted density is  $13.53 \text{ g}\cdot\text{mL}^{-1}$ . The % error in your measurement is: \_\_\_\_\_



Is this person accurate? \_\_\_\_\_

Is the person precise? \_\_\_\_\_

**Summer Review****Station 2****(Ch 1) - MATTER**

This molecule contains \_\_\_\_\_ elements and \_\_\_\_\_ atoms.

The molecular formula for this substance is: \_\_\_\_\_

Calculate the number of seconds in 5.25 years using unit analysis: (1 year = 365.25 days)

A **calculator** displays the answer to a problem as **53.29841**

Report this answer to:

\_\_\_\_\_ 5 significant figures

\_\_\_\_\_ 3 significant figures

\_\_\_\_\_ 1 significant figure

# Summer Review

# Station 3

## (Ch 3) - MEASURING CHEMICALS

Calculate the molar mass of  $\text{Ba}(\text{NO}_3)_2$ .

Calculate the percent composition of each element in the following compound.

$\text{Ba}(\text{NO}_3)_2$	Ba = _____ =	N = _____ =	O = _____ =
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Write the formula for ionic compounds made from these ions:

Name	Cation	Anion	Formula
sodium phosphate			
stannic chloride			
aluminum hydroxide			
ammonium sulfate			

# Summer Review

# Station 4

## (Ch 3) - MOLE PROBLEMS

Solve the following mole problems:

How many molecules of  $\text{CO}_2$  (MM = 44.0 g/mol) are in 17.75 grams of  $\text{CO}_2$ ?

What volume (in Liters) does 20.0 grams of butane,  $\text{C}_4\text{H}_{10}$ , occupy at STP? (MM  $\text{C}_4\text{H}_{10}$  = 58.14 g/mol)

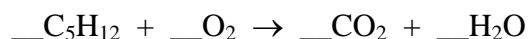
List the 7 diatomic elements:							
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## Summer Review

## Station 5

### (Ch 4) - REACTIONS

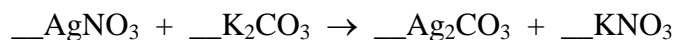
Balance these equations and classify their type (single replacement, double replacement, etc.)



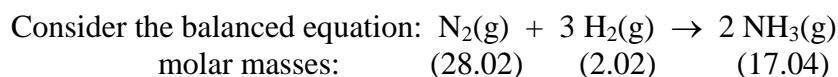
Classify this reaction: \_\_\_\_\_



Classify this reaction: \_\_\_\_\_



Classify this reaction: \_\_\_\_\_



How many grams of  $\text{NH}_3(\text{g})$  is formed when 12.80 grams of  $\text{H}_2(\text{g})$  reacts with 55.25 grams of  $\text{N}_2(\text{g})$ ?

## Summer Review

## Station 6

### (Ch 4) - EMPIRICAL FORMULAS

#### *Empirical Formulas:*

A substance is 33.33% carbon, 7.47% hydrogen, and 59.20% oxygen.

What is its empirical formula? \_\_\_\_\_

## Summer Review

## Station 7

### (Ch 5) - DRIVING FORCES

Circle the precipitates:	PbI <sub>2</sub>	Ba(OH) <sub>2</sub>	Ag <sub>2</sub> CO <sub>3</sub>	CaF <sub>2</sub>	K <sub>2</sub> SO <sub>3</sub>	(NH <sub>4</sub> ) <sub>2</sub> S
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List the strong acids:								
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Write the balanced molecular, ionic, and net ionic equation for:

*Solutions of acetic acid and sodium nitrite are mixed.*

## Summer Review

## Station 8

### (Ch 5) - REDOX REACTIONS

Write the balanced net ionic equation for:

*Aluminum metal is added to a solution of silver nitrate.*

What substance is being oxidized? \_\_\_\_\_ Which atom is being reduced? \_\_\_\_\_

What is the oxidizing agent? \_\_\_\_\_

What is the oxidation number of N in the nitrate ion,  $\text{NO}_3^-$

