

Name: \_\_\_\_\_ Block: \_\_\_\_\_

## PRACTICE: Chemistry 11 Review Quiz

Answer all questions in the space provided. Show all work, including significant figures, for calculations.

### Significant Figures & Scientific Notation

- State the number of significant figures and write each of the following numbers in scientific notation:
  - 0.0120020 \_\_\_\_\_ sig figs: \_\_\_\_\_
  - 8800.0 \_\_\_\_\_ sig figs: \_\_\_\_\_
- Perform the indicated operation(s) and give the answer to the correct number of significant figures:
  - $(12.0)(2.2250) =$  \_\_\_\_\_
  - $7895 + 2.8 \times 10^3 =$  \_\_\_\_\_
  - $(15.0 + 2.3000) / (15.95 + 0.1095) =$  \_\_\_\_\_

### Unit Conversions

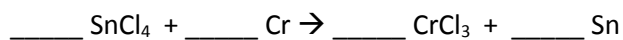
- 15.5 km into nm
- 9.3 mg/s into g/min

### Chemical Names and Formulas

- Write the correct name for each of the following:
  - MgBr \_\_\_\_\_
  - I<sub>2</sub>O<sub>5</sub> \_\_\_\_\_
  - Cu<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub> \_\_\_\_\_
- Write the correct formula for each of the following:
  - Phosphorus trifluoride \_\_\_\_\_
  - Strontium chloride \_\_\_\_\_
  - Copper (II) dichromate \_\_\_\_\_

## Writing, Balancing, & Classifying Chemical Reactions

7. Balance the following reaction:



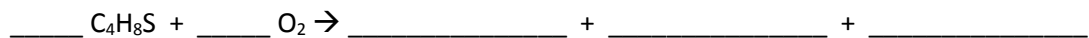
What type of reaction is this? \_\_\_\_\_

8. Write a balanced equation for the following reaction:

Iron(II) chloride reacts with potassium sulphide to produce iron(II) sulphide and potassium chloride.

9. Complete and balance the following reaction.

Classify as (circle the correct answer): synthesis, decomposition, single replacement, double replacement, neutralization, or combustion



## Mole Calculations

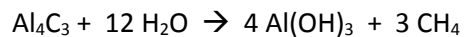
10. Calculate the mass in grams of 2.57 moles of  $\text{NH}_3$ .

11. A sample of cobalt was determined to have  $8.65 \times 10^{25}$  atoms. Calculate the mass of this sample.

12. Calculate the volume at STP occupied by 3.25 kg of  $\text{C}_2\text{H}_6(\text{g})$ ?

## Stoichiometry

13. According to the following reaction, the number of grams of methane (CH<sub>4</sub>) produced when 150.8 g of aluminum carbide is reacted in the presence of excess oxygen is:



14. Using the following reaction, calculate the number of litres of nitrogen monoxide gas produced at STP from the reaction of 17.7 g of nitrogen dioxide.  $3 \text{NO}_2 + \text{H}_2\text{O} \rightarrow 2 \text{HNO}_3 + \text{NO}$

## Solutions & Molarity

15. What volume of 3.5 M CuSO<sub>4</sub> solution is produced with 0.728 mol of solute is dissolved?
16. If 163.4 g of Ni(NO<sub>3</sub>)<sub>2</sub> is dissolved in 865.0 mL of solution, what is the resulting molarity?
17. What concentration of MgCl<sub>2</sub> solution is made by diluting 750.0 mL of 2.850 M NaCl to 4.5 L?

## Chemistry 11 Review Quiz Rubric

	I'm a Star ★	I've got it! ☺	I'm almost there...	I'll keep working on it
<b>Sig Figs &amp; Scientific Notation</b> # 1 & 2				
<b>Unit Conversions</b> #3 & 4				
<b>Chemical Names and Formulas</b> #5 & 6				
<b>Chemical Reactions</b> #7, 8, & 9				
<b>Simple Mole Calculation</b> #10				
<b>Complex Mole Calculations</b> #11 & 12				
<b>Stoichiometry</b> #13 & 14				
<b>Molarity Problems</b> #15, 16 & 17				