Name: _____

WP Unit 7: Solutions and Naming

1. A student dissolves 14.2 grams of sodium sulfate in enough water to prepare 1.50 L of solution. What is the molarity of this solution?

2. How many grams of barium nitrate are in 85.0 mL of a 0.225 M solution?

3. What is the final molarity of a solution if 58.0 mL of a 0.835 M solution is diluted to a final volume of 250.0 mL?

4. How many mL of 0.125 M NaOH will react with 30.00 mL of 0.400 M $CuSO_4$ solution?

5. How many mL of 0.422 M silver nitrate will be necessary to precipitate all the chloride in 125 mL of 0.274 M magnesium chloride solution?

6. If 25.0 mL of 0.0500 M $FeCl_2$ solution are mixed with 5.00 mL of 0.200M K_3PO_4 solution, how many grams of $Fe_3(PO_4)_2$ (molar mass = 357.5 g/mole) will form?

7. How many grams of barium sulfate (233.4 g/mole) will result from mixing 345 mL of 0.237 M sodium sulfate with 484 mL of 0.132 M barium chloride?

8. Describe how you accurately would make 450.0 mL of a 1.25 M iron(III) nitrate solution from solid iron(III) nitrate.

9. Name each of the following compounds:

$NaCl$ _____

K_2S _____

CaO _____

$AlBr_3$ _____

FeI_2 _____

Fe_2O_3 _____

NO_2 _____

CuS _____

Cu_2S _____

S_2Cl_2 _____

$TiCl_4$ _____

10. Write the formulas for the following compounds:

calcium oxide _____

Magnesium hydroxide_____

Cesium chloride _____

Barium sulfide _____

Dinitrogen tetraoxide _____

Tin(II) iodide _____

Hydrobromic acid _____

Sulfurous acid _____

sodium oxide_____

Lithium sulfate _____

Sulfur hexafluoride _____

Mercury(II) sulfide _____

Iron(III) oxide _____

Tin(IV) oxide _____

Carbonic acid _____

Perchloric acid _____