Molarity Practice

MOLARITY   **M = mol / L**

Directions:

Some of the problems ask for molarity, but some ask for moles or grams. Sometimes you must convert grams to moles. You will need to know how to convert milliters to liters. You will also need to criss-cross formulas properly. Watch sig.figs. and units. Show all work.

1) What is the molarity of 0.612 mol of magnesium chloride dissolved in water to make 750 mL of solution?

2) How many grams of sodium nitride are needed to make 350 mL of a 0.33 M solution?

3) Calculate the molarity of a solution made with 34.30 g of lithium nitrite, dissolved to make 4.00 L of solution.

4) How many moles of zinc chloride are needed to make 2.46 L of a 0.680 M aqueous solution?

5) What is the molarity of a solution of 0.579 mol of potassium acetate to make 20. L of solution?

6) How many grams of cesium phosphate are needed to make 425 mL of a 1.50 M solution?

7) Calculate the concentration, in M, of 24.9 g of sodium iodide dissolved in water to make 400.0 mL of solution.

8) Calculate the number of moles of aluminum iodide needed to make 90.00 mL of a 2.75 M solution.

9) How many grams of copper(II) nitrate are needed to make 800.0 mL of a 2.5 M solution?

10) Calculate the concentration, in M, of 9.826 g of sodium sulfate dissolved in water to make 2.50 L of solution.

Calculate the molarity (M) of the following….

11) 0.612 mol of $BaCl_2$ dissolved to make 250 mL of solution

12) 4.50 g of $NaNO_3$ dissolved in 3.00 L of solution

13) 0.379 mol KBr, 20. L

14) 10.66 g of CaF_2, 732 mL solution

Calculate the number of grams needed to make the following:

15) 500. mL of a 0.10 M solution of H_2SO_4

16) 625 mL of a 3.00 M solution of $MgCl_2$

17) 4.0 L of 12 M HCl

18) 100. mL of 0.567 M KSCN