Mole Worksheet

1. How many moles of $MgCO_3$ are in 10.0 g of the substance?

2. What is the mass of 0.70 mol of Al_2O?

3. How many molecules are in 25 g of $Mg(NO_3)_2$?

4. What volume of a 2.0 M solution of Na contains 13 g of solute?

5. How many moles are in 400 g of H_2O?

6. How many hydrogen atoms are in 13 g ofH_2SO_4?

7. There are 200 g/ 500 mL of sucrose $C_{11}H_{22}O_{11}$ in a Coke can. What is the molar concentration of the drink?

8. What mass of solute must be used to prepare 350 mL of a HCl solution at a concentration of 0.75 mol/L?

9. How many grams H_2SO_4 are in 100 mL of a 0.3 M solution?

10. How many moles of $CaCO_3$ are in 4.0 L of a 1.5 M solution?

11. How many molecules are in 10 g of $CaCl_2$?

12. There are 5 g/ 1 L of salt KBr in a Gatorade drink. What is the molar concentration of the drink?

13. How many molecules are in 40.0 g of LiBr?

14. What mass of NaCl must be used in order to make 100.0 mL of a 0.2 M solution?

15. How many chlorine atoms are in 14 g of NaCl?

16. Calculate the molarity of a solution by dissolving 100.0 g of KBr in water to make a 2.0 L solution.

17. What volume of a 2.5 mol/L solution of PCl_3 contains 7.0 g of solute?

18. How much potassium iodide is needed to make 250 mL of a 0.25 mol/L solution?

19. There are 10 g/ 2 L of salt NaCl in a Gatorade drink. What is the molar concentration of the drink?

20. What volume of a 7.0 mol/L solution of H_2O contains 18 g of solute?

21. How many molecules are in 3.0 g of NaCl?