Name_____ H. Chem, Period ____

House of Moles Conversions

Recall: 1 mole = 6.02214 x 10^{23} particles

1. What is the molar mass of magnesium acetate: $Mg(C_2H_3O_2)_2$?

2. How many moles of carbon dioxide are in 3.75 g of CO_2?

3. How many grams of Au are in a 9.86 mol sample of gold?

4. What is the mass of 2.23 x 10^{24} formula units of potassium phosphate, K_3PO_4?

5. How many oxygen atoms are in 5.78 g of magnesium acetate, $Mg(C_2H_3O_2)_2$? (From #1)

6. How many bromide ions are in 2.50 g of $CaBr_2$?

7. What is the mass of NO_2 that contains 3.56 x 10^{24} oxygen atoms?

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8. What is the molar mass of lead (II) hydrogen sulfate; $Pb(HSO_4)_2$?

9. How many oxygen atoms are in 6.99 g of lead (II) hydrogen sulfate (from number 8)?

10. How many grams of tin (IV) hypochlorite, $Sn(ClO)_4$ are in 0.3002 moles?

11. What is the mass of $1.65x10^{24}$ formula units of potassium carbonate, K_2CO_3?

12. How many liters of CO_2 gas are in $2.86x10^{22}$ molecules at STP?