

1. A sample of ammonia (NH_3) has a mass of 56.6 g. How many molecules are in this sample?
- 2.00×10^{24} molecules
 - 1.70×10^{25} molecules
 - 3.32 molecules
 - 6.78×10^{23} molecules
 - 1.78×10^{24} molecules
2. NaHCO_3 is the active ingredient in baking soda. How many grams of oxygen are in 0.35 g of NaHCO_3 ?
- 0.022 g
 - 0.067 g
 - 0.012 g
 - 0.20 g
 - 0.15 g
3. In balancing an equation, we change the _____ to make the number of atoms on each side of the equation balance.
- formulas of compounds in the reactants
 - formulas of compounds in the products
 - subscripts of compounds
 - coefficients of compounds
 - none of these
4. Roundup, an herbicide manufactured by Monsanto, has the formula $\text{C}_3\text{H}_8\text{NO}_5\text{P}$. How many moles of molecules are there in a 500.-g sample of Roundup?
- 1.75
 - 0.338
 - 2.96
 - 84.5
 - none of these
5. Which compound contains the highest percent by mass of hydrogen?
- H_2SO_4
 - HCl
 - H_2O
 - HF
 - H_2S
- Question 6-7** Suppose the reaction $\text{Ca}_3(\text{PO}_4)_2 + 3\text{H}_2\text{SO}_4 \rightarrow 3\text{CaSO}_4 + 2\text{H}_3\text{PO}_4$ is carried out starting with 103 g of $\text{Ca}_3(\text{PO}_4)_2$ and 75.0 g of H_2SO_4 .
6. Which substance is the limiting reactant?
- $\text{Ca}_3(\text{PO}_4)_2$
 - H_3PO_4
 - CaSO_4
 - H_2SO_4
 - none of these
7. How much phosphoric acid will be produced?
- 32.5 g
 - 97.6 g
 - 74.9 g
 - 112 g
 - 50.0 g
8. SO_2 reacts with H_2S as follows:
 $2\text{H}_2\text{S} + \text{SO}_2 \rightarrow 3\text{S} + 2\text{H}_2\text{O}$
When 7.50 g of H_2S reacts with 12.75 g of SO_2 , which statement applies?
- 1.13 g of H_2S remains.
 - SO_2 is the limiting reagent.
 - 0.0216 moles of H_2S remain.
 - 6.38 g of sulfur are formed.
 - 10.6 g of sulfur are formed.