

11-3 Practice Problems

1. Identify the limiting reactant when 1.22 g of O_2 reacts with 1.05 g of H_2 to produce water.
2. Identify the limiting reactant when 4.68 g of Fe reacts with 2.88 g of S to produce FeS .
3. Identify the limiting reactant when 5.87 g of $Mg(OH)_2$ reacts with 12.84 g of HCl to form $MgCl_2$ and water.
4. Identify the limiting reactant when 6.25 g of $AgNO_3$ reacts with 4.12 g of NaCl to form $NaNO_3$ and $AgCl$.
5. Identify the limiting reactant when 7.81 g of HCl reacts with 5.24 g of NaOH to produce NaCl and H_2O .
6. Identify the limiting reactant when 6.33 g of H_2SO_4 reacts with 5.92 g of NaOH to produce Na_2SO_4 and water.
7. Identify the limiting reactant when 43.25 g of CaC_2 reacts with 33.71 g of water to produce $Ca(OH)_2$ and C_2H_2 .
8. Identify the limiting reactant when 65.14 g of $CaCl_2$ reacts with 74.68 g of Na_2CO_3 to produce $CaCO_3$ and NaCl.
9. Identify the limiting reactant when 4.687g of SF_4 reacts with 6.281 g of I_2O_5 to produce IF_5 and SO_2 .
10. If 4.1 g of Cr is heated with 9.3 g of Cl_2 , what mass $CrCl_3$ will be produced?
11. What mass of SO_2 is produced from the reaction between 31.5 g of S_8 and 8.65 g of O_2 ?
12. What mass of SO_3 is produced from the reaction of 12.4 g of SO_2 and 3.45 g of O_2 ?
13. What mass of H_2SO_4 is produced from the reaction of 6.58 g of SO_3 and 1.64 g of H_2O ?
14. What mass of CdS is produced if 8.47 g of cadmium reacts with 2.51 g of sulfur?