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Name

1. Balance the following equations: (Use whole numbers)

a) _____Na₂O₂ + ____H₂O \rightarrow ____NaOH + ____O₂

b) _____RbClO₃ \rightarrow ____RbCl + ____O₂

c) $ZrO_2 + C + Br_2 \rightarrow ZrBr_4 + CO$

d) _____HCI + _____RbOH \rightarrow _____H $_2$ O + _____RbCI

e) $AI_4C_3 + F_2 \rightarrow AIF_3 + CF_4$

Balance each equation & solve the problem. (Show work)

2. BiS₂ + O₂ \rightarrow Bi₂O₄ + SO₂ When 1.37 g of Bismuth Sulfide (BiS₂) reacts, what mass of Bi₂O₄ can form? Given excess O₂.

3. $Cu + H_2SO_4 \rightarrow CuSO_4 + H_2$ If 0.1280 g of copper dissolve in sulfuric acid, what volume of H₂ gas forms at STP?

4. $C_2H_2 + O_2 \rightarrow CO_2 + H_2O$ To burn 12.00 L of C_2H_2 (acetylene) at STP, ____ L of O_2 gas are needed.

5. $K_2CrO_4 + Pb(NO_3)_2 \rightarrow PbCrO_4 + KNO_3$ If 3.88 g of K_2CrO_4 are needed to react completely, what mass of $Pb(NO_3)_2$ must be used?

6. $C_3H_8 + C_2 \rightarrow CO_2 + H_2O$ To burn 80.0 g of propane C_3H_8 , how many liters of C_2 gas will be needed at STP?