1. How many grams of O₂ are required to completely convert 1.2 moles of CO₂?

2. From N₂, 1.2 mol of H₂, 2.4 mol of H₂O, 3.8 mol of O₂, how many H₂ will be needed in the reaction?

3. By the reaction: 2SO₂ + O₂ → 2SO₃, how much SO₃ could be made from 1.2 mol SO₂ and excess O₂?

4. By the reaction: 2SO₂ + O₂ → 2SO₃, how much SO₃ could be made from 1.2 mol SO₂ and excess O₂?

5. From the reaction of H₂ and S to produce H₂S₂, how much H₂ would be needed to produce 217.0 g of H₂S₂?

6. If 3.00 mol of C₂H₂ and 10.0 mol of H₂0 are combined, how many moles of C₂H₂O₃ will be produced?

7. If 1.59 g Na₂CO₃ are reacted with 14.8 mL of HCl, find the balanced reaction:

\[ \text{Na₂CO₃ + HCl → NaCl + H₂O + CO₂} \]

8. IF 30.0 g NH₃ are obtained by reaction of 1.0 mol of N₂ with 3.0 moles of H₂, what is the % yield?

9. No. 1 mol N₂ and 3.0 mol H₂ are stored in a standard tank and 47 L of NH₃ is produced. What is the % yield?

\[ \text{NH₃} \text{ (g)} \xrightarrow{\text{catalyzed by Fe}} \text{ N₂ (g)} + \text{3H₂ (g)} \]