1a) Convert the following word equation into a **BALANCED** chemical equation.

aluminum nitrate and potassium fluoride react to produce potassium nitrate and aluminum fluoride.

\[ \text{Al(NO}_3\text{)}_3 + 3 \text{KF} \rightarrow 3 \text{KNO}_3 + \text{AlF}_3 \]

1b) What kind of reaction is this? Synthesis, Decomposition, Single or Double replacement?

2) In the following reaction, how many grams of oxygen is used to make 10. grams of carbon dioxide? Show your work for full/partial credit.

\[ \text{C}_3\text{H}_8 + 5 \text{O}_2 \rightarrow 3 \text{CO}_2 + 4 \text{H}_2\text{O} \]

\[ 10. \text{g CO}_2 \times \left( \frac{1 \text{mol CO}_2}{44.01 \text{g CO}_2} \right) \times \left( \frac{5 \text{mol O}_2}{3 \text{mol CO}_2} \right) \times \left( \frac{32.00 \text{g O}_2}{1 \text{mol O}_2} \right) = 12 \text{g O}_2 \]