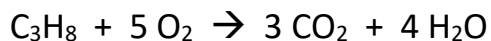
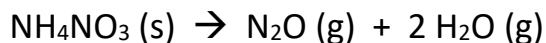


Day 3.5 Warm-Up

1. 26 g of propane, C_3H_8 reacts with excess O_2 to produce CO_2 and H_2O according to the balanced equation below. Calculate the volume of CO_2 produced at $25^\circ C$ and 1.3 atm.



2. A balloon of helium gas occupies a volume of 2.5 L at a temperature of $30^\circ C$. Calculate the temperature at which the balloon will occupy a volume of 4.6 L at constant pressure.



3. A 0.03 mol sample of $NH_4NO_3(s)$ is placed in a 1 L evacuated flask, which is then sealed and heated. The $NH_4NO_3(s)$ decomposes completely according to the balanced equation above. Calculate the total pressure in the flask measured at 400 K.