

Worksheet: Gas Laws, Part II

1. A sample containing 4.80 g of O_2 gas has an initial volume of 15.0 L. Pressure and temperature remain constant.

a. What is the final volume if 0.500 mole of O_2 gas is added?

b. Oxygen is released until the volume is 10.0 L. How many moles of O_2 remain?

2. Mg metal reacts with HCl to produce hydrogen gas. What volume, in liters, of H_2 at STP is released when 8.25 g of Mg reacts?

3. An oxygen gas container has a volume of 20.0 L. How many grams of oxygen are in the container if the gas has a pressure of 845 mm Hg at 22°C ?

4. A gas mixture containing oxygen, nitrogen, and helium exerts a total pressure of 925 torr. If the partial pressures are oxygen 425 torr, and helium 75 torr, what is the partial pressure, in atm, of the nitrogen in the mixture?