

Participation Assignment

CHEM 1050-Chemistry and the Citizen

Name:

#13

Section: 03, MW

Due Date: Wednesday 2/24/2016

1. A weather balloon is filled with helium to a volume of 960.0 L at 15.00 °C and 1.000 atm. The balloon ascends to approximately 5 000 m (16 404 ft) where the balloon's volume changes to 1597.0 L at a temperature of -17.47 °C. What is the helium gas pressure, in atm, in the balloon at this altitude?

2. Assume that the 240.0 L gas cylinder is full when pressurized to 137 atm. Calculate the volume of oxygen, in liters, when the pressure is 1.50 atm.

3. Calculate the standard molar volume, in liters, of an ideal gas.