

Quiz I: Gases

SCH3U_2016 - 2017_V1

NAME: _____

(Total Score: /10)

In all problems, please be certain to show the:

(a) original form of a formula, (b) any formula rearrangements

Please pay particular attention to units and significant figures.

1. Ammonia gas occupies a volume of 455 mL at a pressure of 720 mm Hg. What volume will it occupy at 420 mmHg if the temperature is kept constant. 2

2. If 4.60 g of a gaseous compound occupies a volume of 1.40 L at 27 °C and 93.1 kPa, what is the relative molar mass of the compound? 3

3. A given mass of gas occupies a volume of 3.00 L at 65.0 °C and 580 mm Hg. What would be the volume of the gas at 1020 mm Hg and 90.0 °C ? 3

Multiple Choice (2)

1. A quantity of gas collected at 298 K and 101 kPa occupies a volume of 200 mL. If the pressure on the gas is doubled and its temperature is raised to 596 K the volume occupied by the gas will be:

- A. 50.0 mL B. 100 mL C. 200 mL D. 800 mL

2. The equation for the complete chemical combustion of 1.0 L of hydrogen gas with 1.0 L of oxygen gas is given below:



If all gases are measured at the same temperature and pressure, the volume of the gaseous product in litres is:

- A. 1.0 B. 2.0 C. 3.0 D. 22.7