

Sem 2 – Unit 4 – WS #4

Name: \_\_\_\_\_

Per: \_\_\_\_\_

(Pgs 455 – 463)

Experiments show that when you double the moles of gas the volume of the gas will \_\_\_\_\_ .

State Avogadro's law \_\_\_\_\_

Write down Avogadro's law as shown in the blue box.

- What is assumed to be constant for Avogadro's law to work.

Using the formula above. Solve the following problems: (Show set ups for credit)

\* Assume constant pressure and temp for all these problems

1. If 1.00 moles of a gas occupies a volume of 22.4 liters, what volume will 2.00 moles occupy?
2. If 1.00 moles of oxygen occupies a volume of 22.4, how many moles would occupy 1.00 liters?
3. If 1.00 moles of nitrogen gas occupies a volume of 22.4 liters, what volume would 1.00 grams of nitrogen gas occupy?
4. If 1.00 moles of chlorine gas occupies a volume of 22.4 liters how many grams of chlorine would occupy a volume of 89.6 liters?
5. This is a review question convert the following pressures.

$$1100 \text{ mmHg} = \underline{\hspace{2cm}} \text{ atm}$$

$$.998 \text{ atm} = \underline{\hspace{2cm}} \text{ mmHg}$$

