Chemistry 115 Name

Dr. Cary Willard

Quiz 8a (20 points) April 20, 2010

Must show all work to receive credit. Use proper significant figures.

PV=nRT, R=0.0821 L atm/mol K=62.4 L torr/mol K, 1 atm=760 torr=760 mm Hg

1. (5 points) The pressure at the top of Mt. Woodsen is 689 mm Hg, what is that pressure in atmospheres?
2. (5 points) A container is filled with argon with a pressure of 385 torr at 35oC. If the container is heated to 142oC, what is the new pressure of argon in the container?
3. (6 points) An unknown gas has a density of 9.24 g/L at 61oC and 2.55 atm. What is the molar mass of the unknown gas?
4. (4 points) Explain why a gas exerts a pressure using kinetic molecular theory.

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PV=nRT, R=0.0821 L atm/mol K=62.4 L torr/mol K, 1 atm=760 torr=760 mm Hg

1. (5 points) The pressure at the top of Mt. Woodsen is 652 mm Hg, what is that pressure in atmospheres?
2. (5 points) A container is filled with argon with a pressure of 647 torr at 35oC. If the container is heated to 142oC, what is the new pressure of argon in the container?
3. (6 points) An unknown gas has a density of 15.8 g/L at 61oC and 4.55 atm. What is the molar mass of the unknown gas?
4. (4 points) Explain why a gas exerts a pressure using kinetic molecular theory.