Molar Mass of Gasses Worksheet

- 1. How many moles are in a sample of that occupies
 - (a) 44.8 L at STP?
 - (b) 11.2 L at STP?
 - (c) 20.0 L at STP?
- 2. A 30.6 g sample of gas occupies 22.4 L at STP. What is the molecular weight of this gas?
- 3. A 40.0 g gas sample occupies 11.2 L at STP. Find the molecular weight of this gas.
- 4. A 12.0 g sample of gas occupies 19.2 L at STP. What is the molecular weight of this gas?
- 5. How many moles of gas are contained in 890.0 mL at 21.0 °C and 750.0 mm Hg pressure?
- 6. Calculate the volume 3.00 moles of a gas will occupy at 24.0 °C and 100 kPa.
- 7. At what temperature will 0.654 moles of neon gas occupy 12.30 L at 1.95 atmospheres?
- 8. 1.09 g of H₂ is contained in a 2.00 L container at 20.0 °C. What is the pressure in this container in atmospheres?
- 9. What volume will 20.0 g of Argon occupy at STP?
- 10. What volume would 32.0 g of NO₂ gas occupy at 3.12 atm and 18.0 °C?
- 11. Calculate the molecular weight of a gas if 35.44 g of the gas stored in a 7.50 L tank that exerts a pressure of 60.0 atm at a constant temperature of 35.5 °C.