## 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 $21.0^{\circ} \mathrm{C}$ and 750.0 mm Hg pressure?
6. Calculate the volume 3.00 moles of a gas will occupy at $24.0^{\circ} \mathrm{C}$ and 100 kPa .
7. At what temperature will 0.654 moles of neon gas occupy 12.30 L at 1.95 atmospheres?
8. $\quad 1.09 \mathrm{~g}$ of $\mathrm{H}_{2}$ is contained in a 2.00 L container at $20.0^{\circ} \mathrm{C}$. 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 $\mathrm{NO}_{2}$ gas occupy at 3.12 atm and $18.0^{\circ} \mathrm{C}$ ?
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 $35.5^{\circ} \mathrm{C}$.
