

Name: _____

Date: _____

Moles

Avagadro's Number = 6.02×10^{23} atoms/mol
1 mol of a gas at STP occupies 22.4 L

1. How many atoms of Oxygen are there in 18g of water? 6.02×10^{23}
2. How many atoms of Hydrogen are there in 18g of water? 1.204×10^{24}
3. How many molecules of H_2O are there in 18g of water? 6.02×10^{23}
4. What is the mass of 1 mole of O_2 ? 32 g
5. What is the mass of 1 molecule of O_2 ? $5.32 \times 10^{-23}g$
6. What is the mass of 2 mol of H_2SO_4 ? 196 g
7. What is the density of O_2 at STP? 1.43 g/L
8. 3 L of a gas weighs 2 g. What is the molecular mass? 14.9 g/mol
9. What volume does 22g of CO_2 at STP occupy? 11.2 L
10. How many atoms of Hydrogen are in 67.2 L of H_2 at STP? 3.612×10^{24}