

## AVOGADRO'S HYPOTHESIS - SAMPLE PROBLEMS **KEY**

1.  $3.67 \times 10^{32}$  molecules of oxygen gas.
2. 529 g
- 2b.  $8.37 \times 10^{24}$  molecules
3.  $1.23 \times 10^{10}$  g
4. 651 g
5. 136 L of each gas
6.  $2.36 \times 10^3$  g
7.  $2.36 \times 10^4$  g
- 7b. mass of Ne: mass of  $H_2$  = 10: 1 ratio
8.  $4.73 \times 10^{24}$  CO molecules
9. 491 g  $Cl_2$
10. 131.3 g / mole    It must be Xe
11.  $5.91 \times 10^{21}$  Ar atoms
12. 395 L