

3 • Molecules and Compounds

Mole Calculations – 6 at a Time

1 mole = 6.02×10^{23} molecules = 22.4 L (@ STP) = gram molecular mass

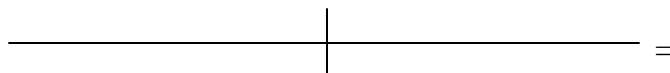
I. Molar Masses

Calculate these molar masses. Look these over. You should have a visual memory of common compounds.

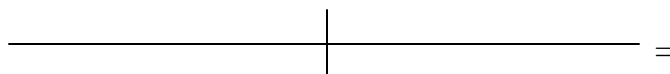
CO ₂		CH ₄		H ₂ O		C ₂ H ₅ OH	
Cl ₂		CCl ₄		SO ₂		O ₂	
H ₂ S		NaCl		He		HCl	

II. One Conversion-Factor Problems

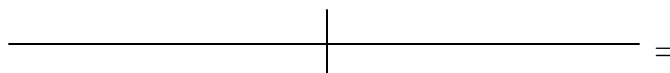
1. G:
D:



2. G:
D:

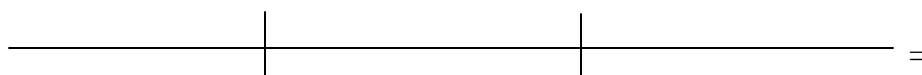


3. G:
D:

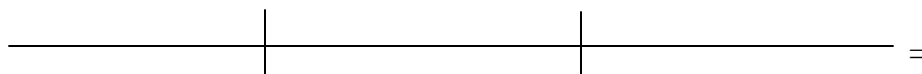


II. Two Conversion-Factor Problems

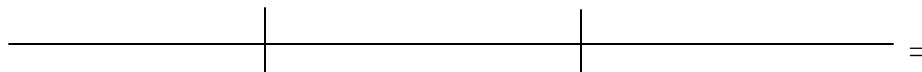
1. G:
D:



2. G:
D:



3. G:
D:



$$1 \text{ mole} = 6.02 \times 10^{23} \text{ molecules} = 22.4 \text{ L (@ STP)}$$

IV. Miscellaneous Problems

These are problems that are RELATED to mole calculations, but have a twist. Read them carefully.
“Think outside the box.”

1.

2.

3.