(#6-1)
Chemistry
Stoichiometry
Mole #1

1 mole = 6.022E 23 things

Convert the following to moles.

1. 3.011 E 23 molecules of Hydrogen gas = $\frac{1\ mol\ H_2}{6.022E23\ H_2}$ = 0.5 mol H_2

2. 9.995 E24 molecules $NaNO_3$ = $\frac{1\ mol\ NaNO_3}{6.022E23\ NaNO_3}$ = 16.60 mol $NaNO_3$

3. 2.99 E22 ions of OH^- = $\frac{1\ mol\ OH^-}{6.022E23\ OH^-}$ = 0.0497 mol OH^-

4. 1.22 E 23 atoms Au = $\frac{1\ mol\ Au}{6.022E23\ Au}$ = 0.203 mol Au

5. 4.98E21 molecules NO_2 = $\frac{1\ mol\ NO_2}{6.022E23\ NO_2}$ = 0.00827 mol NO_2

Convert the following from moles to number of particles

6. 2.5 moles Oxygen gas = $\frac{6.022E23\ O_2}{1\ mol\ O_2}$ = 1.5E24 O_2

7. 1 mol sodium hydroxide $\frac{6.022E23\ NaOH}{1\ mol\ NaOH}$ = 6.022E23 NaOH

8. 2.2 moles lithium ions $\frac{6.022E23\ Li^+}{1\ mol\ Li^+}$ = 1.3E24 Li^+

9. 1.5 moles copper metal $\frac{6.022E23\ Cu}{1\ mol\ Cu}$ = 9.0E23 Cu

10. .45 moles Hydrogen gas $\frac{6.022E23\ H_2}{1\ mol\ H_2}$ = 2.7E23 H_2