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Science and Technology 404/448

Chemical Equations

1. Balance the following equations.

Example: $2 K + S \rightarrow K_2S$

a)2Na + $Cl_2 \rightarrow 2NaCl$

b) S + $O_2 \rightarrow SO_2$

c) $2H_2O \rightarrow 2H_2 + O_2$

d)2Cu + O_2 \rightarrow 2CuO

eXNa + $O_2 \rightarrow 2 Na_2O$

f) Mg + Cl_2 \rightarrow Mg Cl_2

g)2P + $3 Cl_2 \rightarrow 2 PCl_3$

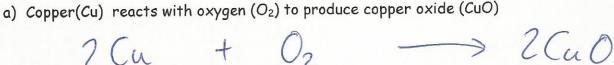
h)4P + $5 O_2 \rightarrow 2 P_2 O_5$

i) N_2 + $3H_2$ \rightarrow $2NH_3$

 $j)2N_2 + 5O_2 \rightarrow 2N_2O_5$

k)2NH₃ + $3 \text{ Cl}_2 \rightarrow 6 \text{ HCl} + \text{ N}_2$

2.	Represent each of the following reactions with a chemical equation and then balance the equation.
	Example: Hydrogen gas (H ₂) reacts with oxygen gas (O ₂) to form water. $2H_2 + O_2 \longrightarrow 2H_2O$



c) Sodium (Na) reacts with water to form sodium hydroxide (NaOH) and hydrogen gas (H_2) .

d) Hydrochloric acid (HCl) reacts with potassium hydroxide (KOH) to form potassium chloride (KCl) and water.

e) Methane (CH_4) is burned in the presence of oxygen (O_2) to produce carbon dioxide (CO_2) and water,

f) Propane (C_3H_8) reacts with oxygen gas (O_2) to produce carbon dioxide gas (CO_2) and water.