SCH 4C J. Kropac

Balancing Chemical Equations

Balance the skeleton equations:										
			02	•						
	Na	+	H ₂ 0	→	NaO	Η	+	H ₂		
	Al ₂ 03	3	→	AI	+	02				
	KCI0;	3 →	KCI		+	02				
	Mg	+	HCI		→	MgCl ₂		+	H ₂	
	Fe20	3	+	С		→	Fe		+	CO ₂
	NH3		+	02		→	NO		+	H ₂ 0
	NaCl		+	F_2	→	NaF	+	Cl_2		
	Mg	+	N ₂	→	Mg3N	J ₂				
	Al +		H ₂ SO4		→	H ₂		+	Al2(SO4)3	
	Cu	+	HNO3	3 →	NO		+	H ₂ 0	+	3 Cu(NO3)2
	Fe(C	1H)3	+	H ₂ SC) ₄	→	Fe ₂ (SO4)3	+	H ₂ 0

Write down the formulas for each of the following reactions in a skeleton equation, and then balance the equation you wrote. The first one is done for you.

1. Solid copper (III) oxide combines with hydrogen gas to produce solid copper and water.

Skeleton Equation: $Cu_2O_{3(s)} + H_{2(g)} \rightarrow Cu_{(s)} + H_2O_{(b)}$

Balanced Equation: $CU_2O_{3(s)} + 3H_{2(q)} \rightarrow 2CU_{(s)} + 3H_2O_{(1)}$

2. Solid lead (II) nitrate combines with solid potassium iodide to create solid lead (II) iodide and solid potassium nitrate. (2 marks)

3. Calcium metal and water combine to produce aqueous calcium hydroxide and hydrogen gas. *Use (aq) to represent the state of aqueous. (2 marks)

4. Solid lead(II) sulphide and oxygen gas combine to form lead and sulphur dioxide gas. (2 marks)

5. Hydrogen sulphide gas can be broken into hydrogen gas and solid sulphur. (2 marks)