WRITE IN THE CORRECT FORMULA THEN BALANCE THE CHEMICAL EQUATIONS

Note: Many elements exist as diatomic molecules. ie. H_2, O_2, N_2, F_2, Cl_2, Br_2, I_2

1.	Hydrogen	+	Oxygen	→	Water		
		+		→			
	METALLIC OXIDE	+	WATER	→	BASE		
2.	Sodium oxide	+	Water	→	Sodium hydroxide		
		+		→			
3.	Calcium oxide	+	Water	→	Calcium hydroxide		
		+		→			
4.	Potassium oxide	+	Water	→	Potassium hydroxide		
		+		→			
5.	Nitrogen	+	Hydrogen	→	Ammonia		
		+		→	NH_3		
	NON METALLIC OXIDE	+	WATER	→	ACID		
6.	Carbon dioxide	+	Water	→	Carbonic acid		
		+		→	H_2CO_3		
7.	Sulfur dioxide	+	Water	→	Sulfurous acid		
		+		→	H_2SO_3		
8.	Sulfur trioxide	+	Water	→	Sulfuric acid		
		+		→	H_2SO_4		
9.	Nitrogen dioxide	+	Water	→	Nitric acid	+	Nitrous acid
		+		→	HNO_3	+	HNO_2
10.	Phosphorus pentoxide	+	Water	→	Phosphoric acid		
	P_4O_{10}	+		→	H_3PO_4		
11.	Hydrogen	+	Chlorine	→	Hydrogen chloride		
		+		→			
12.	Sulfuric acid	+	Sodium chloride	→	Hydrochloric acid	+	Sodium sulfate
		+		→		+	

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Note: Many elements exist as diatomic molecules. ie. H_2, O_2, N_2, F_2, Cl_2, Br_2, I_2

13.	Iron	+	Oxygen	⟶	Iron(III) oxide			
		+		⟶				
14.	Aluminium	+	Fluorine	⟶	Aluminium fluoride			
		+		⟶				
15.	Lead (IV) oxide	+	Carbon	⟶	Lead	+	Carbon dioxide	
		+		⟶		+		
16.	Magnesium hydroxide	+	Hydrochloric acid	⟶	Magnesium chloride	+	Water	
		+		⟶		+		
17.	Potassium	+	Water	⟶	Potassium hydroxide	+	Hydrogen	
		+		⟶		+		
18.	Iron	+	Sulfuric acid	⟶	Iron(II) sulfate	+	Hydrogen	
		+		⟶		+		
19.			Hydrogen peroxide	⟶	Oxygen	+	Water	
			H_2O_2	⟶		+		
20.	Lithium hydroxide	+	Carbon dioxide	⟶	Lithium carbonate	+	Water	
		+		⟶		+		
21.	Copper sulfate	+	Iron	⟶	Iron sulfate	+	Copper	
		+		⟶		+		
22.	Calcium bromide	+	Chlorine	⟶	Calcium chloride	+	Bromine	
		+		⟶		+		
23.	Sulfuric acid	+	Barium hydroxide	⟶	Barium sulfate	+	Water	
		+		⟶		+		
24.	Copper(II) sulfide	+	Hydrogen	⟶	Copper	+	Hydrogen sulfide	
		+		⟶		+		
25.	Propane gas (L.P.G.)	+	Oxygen	⟶	Carbon dioxide	+	Water	
	C_3H_8	+		⟶		+		

WRITE IN THE CORRECT FORMULA THEN BALANCE THE CHEMICAL EQUATIONS

Note: Many elements exist as diatomic molecules. ie. H_2, O_2, N_2, F_2, Cl_2, Br_2, I_2

ADVANCED CHEMICAL EQUATIONS						
26.	Iron(III) oxide	+	Carbon monoxide	→	Iron + Carbon dioxide	
				→		
27.	Copper	+	Nitric acid	→	Nitrogen dioxide + Copper(II) nitrate + Water	
				→	NO_2	
28.	Carbon dioxide	+	Water	→	Glucose + Oxygen	
				→	$C_6H_{12}O_6$	
29.			Glucose	→	Carbon dioxide + Ethanol	
				→	C_2H_5OH	
30.	Calcium hypochlorite	+	Hydrochloric acid	→	Calcium chloride + Water + Chlorine	
	$Ca(ClO)_2$			→		
31.	Phosphorus pentachloride	+	Water	→	Phosphoric acid + Hydrogen chloride	
	PCl_5	+		→	H_3PO_4	
32.	Iron(II,III) oxide	+	Carbon monoxide	→	Iron + Carbon dioxide	
	Fe_3O_4	+	CO	→		
33.	Ammonia	+	Oxygen	→	Nitrogen monoxide + Water	
	NH_3			→	NO	
34.	Copper	+	Nitric acid	→	Nitrogen monoxide + Copper(II) nitrate + Water	
				→	NO	
35.	Potassium permanganate	+	Hydrochloric acid	→	Manganese chloride + Potassium chloride + Chlorine + Water	
	$KMnO_4$			→	$MnCl_2$	

WRITE IN THE CORRECT FORMULA THEN BALANCE THE CHEMICAL EQUATIONS - ANSWERS

Note: Many elements exist as diatomic molecules. ie. H_2, O_2, N_2, F_2, Cl_2, Br_2, I_2

1.	Hydrogen	+	Oxygen	⟶	Water		
	$2H_2$	+	O_2	⟶	$2H_2O$		
	METALLIC OXIDE	+	WATER	⟶	BASE		
2.	Sodium oxide	+	Water	⟶	Sodium hydroxide		
	Na_2O	+	H_2O	⟶	2NaOH		
3.	Calcium oxide	+	Water	⟶	Calcium hydroxide		
	CaO	+	H_2O	⟶	$Ca(OH)_2$		
4.	Potassium oxide	+	Water	⟶	Potassium hydroxide		
	K_2O	+	H_2O	⟶	2KOH		
5.	Nitrogen	+	Hydrogen	⟶	Ammonia		
	N2	+	$3H_2$	⟶	$2NH_3$		
	NON METALLIC OXIDE	+	WATER	⟶	ACID		
6.	Carbon dioxide	+	Water	⟶	Carbonic acid		
	CO_2	+	H_2O	⟶	H_2CO_3		
7.	Sulfur dioxide	+	Water	⟶	Sulfurous acid		
	SO_2	+	H_2O	⟶	H_2SO_3		
8.	Sulfur trioxide	+	Water	⟶	Sulfuric acid		
	SO_3	+	H_2O	⟶	H_2SO_4		
9.	Nitrogen dioxide	+	Water	⟶	Nitric acid	+	Nitrous acid
	$2NO_2$	+	H_2O	⟶	HNO_3	+	HNO_2
10.	Phosphorus pentoxide	+	Water	⟶	Phosphoric acid		
	P_4O_{10}	+	$6H_2O$	⟶	$4H_3PO_4$		
11.	Hydrogen	+	Chlorine	⟶	Hydrogen chloride		
	H_2	+	Cl_2	⟶	2HCl		
12.	Sulfuric acid	+	Sodium chloride	⟶	Hydrochloric acid	+	Sodium sulfate
	$H2SO_4$	+	2NaCl	⟶	2HCl	+	Na_2SO_4

WRITE IN THE CORRECT FORMULA THEN BALANCE THE CHEMICAL EQUATIONS - ANSWERS

Note: Many elements exist as diatomic molecules. ie. H_2, O_2, N_2, F_2, Cl_2, Br_2, I_2

13.	Iron	+	Oxygen	→	Iron(III) oxide		
	4Fe	+	$3O_2$	→	$2Fe_2O_3$		
14.	Aluminium	+	Fluorine	→	Aluminium fluoride		
	2Al	+	$3F_2$	→	$2AlF_3$		
15.	Lead (IV) oxide	+	Carbon	→	Lead	+	Carbon dioxide
	PbO_2	+	C	→	Pb	+	CO_2
16.	Magnesium hydroxide	+	Hydrochloric acid	→	Magnesium chloride	+	Water
	$Mg(OH)_2$	+	2HCl	→	$MgCl_2$	+	$2H_2O$
17.	Potassium	+	Water	→	Potassium hydroxide	+	Hydrogen
	2K	+	H_2O	→	2KOH	+	H_2
18.	Iron	+	Sulfuric acid	→	Iron(II) sulfate	+	Hydrogen
	Fe	+	H_2SO_4	→	$FeSO_4$	+	H_2
19.			Hydrogen peroxide	→	Oxygen	+	Water
			$2H_2O_2$	→	O_2	+	$2H_2O$
20.	Lithium hydroxide	+	Carbon dioxide	→	Lithium carbonate	+	Water
	2LiOH	+	CO_2	→	Li_2CO_3	+	H_2O
21.	Copper sulfate	+	Iron	→	Iron sulfate	+	Copper
	$CuSO_4$	+	Fe	→	$FeSO_4$	+	Cu
22.	Calcium bromide	+	Chlorine	→	Calcium chloride	+	Bromine
	$CaBr_2$	+	Cl_2	→	$CaCl_2$	+	Br_2
23.	Sulfuric acid	+	Barium hydroxide	→	Barium sulfate	+	Water
	H_2SO_4	+	$Ba(OH)_2$	→	$BaSO_4$	+	$2H_2O$
24.	Copper(II) sulfide	+	Hydrogen	→	Copper	+	Hydrogen sulfide
	CuS	+	H_2	→	Cu	+	H_2S
25.	Propane gas (L.P.G.)	+	Oxygen	→	Carbon dioxide	+	Water
	C_3H_8	+	$5O_2$	→	$3CO_2$	+	$4H_2O$

WRITE IN THE CORRECT FORMULA THEN BALANCE THE CHEMICAL EQUATIONS - ANSWERS

Note: Many elements exist as diatomic molecules. ie. H_2, O_2, N_2, F_2, Cl_2, Br_2, I_2

ADVANCED CHEMICAL EQUATIONS								
26.	Iron(III) oxide	+	Carbon monoxide	⟶	Iron	+	Carbon dioxide	
	Fe_2O_3	+	CO	⟶	2Fe	+	$3CO_2$	
27.	Copper	+	Nitric acid	⟶	Nitrogen dioxide	+	Copper(II) nitrate	+ Water
	Cu	+	$4HNO_3$	⟶	$2NO_2$	+	$Cu(NO_3)_2$	+ $2H_2O$
28.	Carbon dioxide	+	Water	⟶	Glucose	+	Oxygen	
	$6CO_2$	+	$6H_2O$	⟶	$C_6H_{12}O_6$	+	$6O_2$	
29.			Glucose	⟶	Carbon dioxide	+	Ethanol	
			$C_6H_{12}O_6$	⟶	$2CO_2$	+	$2C_2H_5OH$	
30.	Calcium hypochlorite	+	Hydrochloric acid	⟶	Calcium chloride	+	Water	+ Chlorine
	$Ca(ClO)_2$	+	4HCl	⟶	$CaCl_2$	+	$2H_2O$	+ $2Cl_2$
31.	Phosphorus pentachloride	+	Water	⟶	Phosphoric acid	+	Hydrogen chloride	
	PCl_5	+	$4H_2O$	⟶	H_3PO_4	+	5HCl	
32.	Iron(II,III) oxide	+	Carbon monoxide	⟶	Iron	+	Carbon dioxide	
	Fe_3O_4	+	4CO	⟶	3Fe	+	$4CO_2$	
33.	Ammonia	+	Oxygen	⟶	Nitrogen monoxide	+	Water	
	$4NH_3$	+	$5O_2$	⟶	4NO	+	$6H_2O$	
34.	Copper	+	Nitric acid	⟶	Nitrogen monoxide	+	Copper(II) nitrate	+ Water
	3Cu	+	$8HNO_3$	⟶	2NO	+	$3Cu(NO_3)_2$	+ $4H_2O$
35.	Potassium permanganate	+	Hydrochloric acid	⟶	Manganese chloride	+	Potassium chloride	+ Chlorine + Water
	$2KMnO_4$	+	16HCl	⟶	$2MnCl_2$	+	2KCl	+ $5Cl_2$ + $8H_2O$