

WORKSHEET 1 - BALANCE THE FOLLOWING CHEMICAL EQUATIONS WHERE NECESSARY.

Note: Many elements exist as diatomic molecules. ie. H₂, O₂, N₂, F₂, Cl₂, Br₂, I₂

1.	Na	+	O ₂	→	Na ₂ O		
2.	Na	+	Cl ₂	→	NaCl		
3.	Na	+	H ₂ O	→	NaOH	+	H ₂
4.	Na	+	H ₂	→	NaH		
5.	Na	+	N ₂	→	Na ₃ N		
6.	Mg	+	O ₂	→	MgO		
7.	Mg	+	Cl ₂	→	MgCl ₂		
8.	Mg	+	CO ₂	→	MgO	+	C
9.	Ag	+	O ₂	→	AgO		
10.	Al	+	Br ₂	→	AlBr ₃		
11.	Al	+	O ₂	→	Al ₂ O ₃		
12.	Al	+	N ₂	→	AlN		
13.	Li	+	HCl	→	LiCl	+	H ₂
14.	Mg	+	HCl	→	MgCl ₂	+	H ₂
15.	Li	+	H ₂ SO ₄	→	Li ₂ SO ₄	+	H ₂
16.	Sr	+	H ₂ SO ₄	→	SrSO ₄	+	H ₂
17.	NH ₃	+	HCl	→	NH ₄ Cl		
18.	CuO	+	HCl	→	CuCl ₂	+	H ₂ O
19.	Ca(OH) ₂	+	CO ₂	→	CaCO ₃	+	H ₂ O
20.	Al	+	HCl	→	AlCl ₃	+	H ₂
21.	Fe	+	CuSO ₄	→	Cu	+	FeSO ₄
22.	Al	+	Fe ₂ O ₃	→	Fe	+	Al ₂ O ₃
23.	KI	+	Pb(NO ₃) ₂	→	PbI ₂	+	KNO ₃
24.	Al	+	AgNO ₃	→	Ag	+	Al(NO ₃) ₃
25.	Al	+	H ₂ SO ₄	→	Al ₂ (SO ₄) ₃	+	H ₂

WORKSHEET 2- BALANCE THE FOLLOWING CHEMICAL EQUATIONS WHERE NECESSARY.

Note: Many elements exist as diatomic molecules. ie. H₂, O₂, N₂, F₂, Cl₂, Br₂, I₂

26.	Na	+	S	→	Na ₂ S		
27.	Na	+	I ₂	→	NaI		
28.			HgO	→	Hg	+	O ₂
29.	ZnO	+	C	→	Zn	+	CO ₂
30.	Na	+	F ₂	→	NaF		
31.			CuCO ₃	→	CuO	+	CO ₂
32.	Na	+	I ₂	→	NaI		
33.	Ca	+	H ₂ O	→	Ca(OH) ₂	+	H ₂
34.	Ba	+	O ₂	→	BaO		
35.	Ag	+	S	→	Ag ₂ S		
36.	CH ₄	+	O ₂	→	CO ₂	+	H ₂ O
37.	Mg	+	N ₂	→	Mg ₃ N ₂		
38.	Mg	+	CO ₂	→	MgO	+	C
39.	Ba	+	HCl	→	BaCl ₂	+	H ₂
40.	K ₂ O	+	H ₂ SO ₄	→	K ₂ SO ₄	+	H ₂ O
41.	CuO	+	HNO ₃	→	Cu(NO ₃) ₂	+	H ₂ O
42.	NaI	+	Cl ₂	→	NaCl	+	I ₂
43.	Al	+	F ₂	→	AlF ₃		
44.	NaOH	+	CO ₂	→	Na ₂ CO ₃	+	H ₂ O
45.	Al ₂ O ₃	+	HCl	→	AlCl ₃	+	H ₂ O
46.	Cu	+	AgNO ₃	→	Cu(NO ₃) ₂	+	Ag
47.	PbS	+	O ₂	→	PbO	+	SO ₂
48.	Pb ₃ O ₄	+	C	→	Pb	+	CO ₂
49.	Fe	+	Cl ₂	→	FeCl ₃		
50.	Al ₂ O ₃	+	NaOH	+	H ₂ O	→	NaAl(OH) ₄

WORKSHEET 1 - BALANCE THE FOLLOWING CHEMICAL EQUATIONS - ANSWERS

✓ = The chemical equation is already balanced.

1.	4Na	+	O ₂	→	2Na ₂ O		
2.	2Na	+	Cl ₂	→	2NaCl		
3.	2Na	+	2H ₂ O	→	2NaOH	+	H ₂
4.	2Na	+	H ₂	→	2NaH		
5.	6Na	+	N ₂	→	2Na ₃ N		
6.	Mg	+	O ₂	→	2MgO		
7.	Mg	+	Cl ₂	→	MgCl ₂		✓
8.	2Mg	+	CO ₂	→	2MgO	+	C
9.	2Ag	+	O ₂	→	2AgO		
10.	2Al	+	3Br ₂	→	2AlBr ₃		
11.	4Al	+	3O ₂	→	2Al ₂ O ₃		
12.	2Al	+	N ₂	→	2AlN		
13.	2Li	+	2HCl	→	2LiCl	+	H ₂
14.	Mg	+	2HCl	→	MgCl ₂	+	H ₂
15.	2Li	+	H ₂ SO ₄	→	Li ₂ SO ₄	+	H ₂
16.	Sr	+	H ₂ SO ₄	→	SrSO ₄	+	H ₂
17.	NH ₃	+	HCl	→	NH ₄ Cl		✓
18.	CuO	+	2HCl	→	CuCl ₂	+	H ₂ O
19.	2Al	+	6HCl	→	2AlCl ₃	+	3H ₂
20.	Fe	+	CuSO ₄	→	Cu	+	FeSO ₄
21.	2Al	+	Fe ₂ O ₃	→	2Fe	+	Al ₂ O ₃
22.	2KI	+	Pb(NO ₃) ₂	→	PbI ₂	+	2KNO ₃
23.	Al	+	3AgNO ₃	→	3Ag	+	Al(NO ₃) ₃
24.	2Al	+	3H ₂ SO ₄	→	Al ₂ (SO ₄) ₃	+	3H ₂
25.	Ca(OH) ₂	+	CO ₂	→	CaCO ₃	+	H ₂ O

WORKSHEET 2 - BALANCE THE FOLLOWING CHEMICAL EQUATIONS - ANSWERS

✓ = The chemical equation is already balanced.

26.	2Na	+	S	→	Na ₂ S		
27.	2Na	+	I ₂	→	2NaI		
28.			2HgO	→	2Hg	+	O ₂
29.	2ZnO	+	C	→	2Zn	+	CO ₂
30.	2Na	+	F ₂	→	2NaF		
31.			CuCO ₃	→	CuO	+	CO ₂ ✓
32.	2Na	+	I ₂	→	2NaI		
33.	Ca	+	2H ₂ O	→	Ca(OH) ₂	+	2H ₂
34.	2Ba	+	O ₂	→	2BaO		
35.	2Ag	+	S	→	Ag ₂ S		
36.	CH ₄	+	2O ₂	→	CO ₂	+	2H ₂ O
37.	3Mg	+	N ₂	→	Mg ₃ N ₂		
38.	2Mg	+	CO ₂	→	2MgO	+	C
39.	Ba	+	2HCl	→	BaCl ₂	+	H ₂
40.	K ₂ O	+	H ₂ SO ₄	→	K ₂ SO ₄	+	H ₂ O ✓
41.	CuO	+	2HNO ₃	→	Cu(NO ₃) ₂	+	H ₂ O
42.	2NaI	+	Cl ₂	→	2NaCl	+	I ₂
43.	2Al	+	3F ₂	→	2AlF ₃		
44.	2NaOH	+	CO ₂	→	Na ₂ CO ₃	+	H ₂ O
45.	Al ₂ O ₃	+	6HCl	→	2AlCl ₃	+	3H ₂ O
46.	Cu	+	2AgNO ₃	→	Cu(NO ₃) ₂	+	2Ag
47.	2PbS	+	3O ₂	→	2PbO	+	2SO ₂
48.	Pb ₃ O ₄	+	2C	→	3Pb	+	2CO ₂
49.	2Fe	+	3Cl ₂	→	2FeCl ₃		
50.	Al ₂ O ₃	+	2NaOH + 3H ₂ O	→	2NaAl(OH) ₄		