



## BALANCE THE GIVEN CHEMICAL EQUATIONS

### Worksheet - 87

1.  $2 \text{Al(s)} + \text{ \_\_\_\_\_\_ } \text{HCl(aq)} = 2 \text{AlCl}_3\text{(aq)} + \text{ \_\_\_\_\_\_ } \text{H}_2\text{(g)}$
2.  $\text{ \_\_\_\_\_\_ } \text{CO}_2 + 6 \text{H}_2\text{O} = \text{C}_6\text{H}_{12}\text{O}_6 + \text{ \_\_\_\_\_\_ } \text{O}_2$
3.  $2 \text{Fe(OH)}_3\text{(s)} + \text{ \_\_\_\_\_\_ } \text{H}_2\text{SO}_4\text{(aq)} = \text{Fe}_2\text{(SO}_4\text{)}_3\text{(aq)} + \text{ \_\_\_\_\_\_ } \text{H}_2\text{O(l)}$
4.  $\text{ \_\_\_\_\_\_ } \text{Sr(OH)}_2\text{(aq)} + 2 \text{H}_3\text{PO}_4\text{(aq)} = \text{Sr}_3\text{(PO}_4\text{)}_2\text{(s)} + \text{ \_\_\_\_\_\_ } \text{H}_2\text{O(l)}$
5.  $4 \text{C}_{10}\text{H}_{11}\text{NO}_2 + \text{ \_\_\_\_\_\_ } \text{O}_2 = 40 \text{CO}_2 + 22 \text{H}_2\text{O} + \text{ \_\_\_\_\_\_ } \text{NO}$
6.  $\text{ \_\_\_\_\_\_ } \text{Li} + \text{N}_2 = \text{ \_\_\_\_\_\_ } \text{Li}_3\text{N}$
7.  $9 \text{S}_1 + \text{ \_\_\_\_\_\_ } \text{Al}_3 = \text{ \_\_\_\_\_\_ } \text{Al}_2\text{S}_3$
8.  $\text{ \_\_\_\_\_\_ } \text{P}_4 + 12 \text{NaOH} + 24 \text{H}_2\text{O} = 16 \text{PH}_3 + \text{ \_\_\_\_\_\_ } \text{NaHPO}_3$
9.  $\text{CaSO}_4 + \text{SiO}_2 + \text{ \_\_\_\_\_\_ } \text{C} = \text{CaSiO}_3 + \text{ \_\_\_\_\_\_ } \text{CO} + \text{S}$
10.  $\text{ \_\_\_\_\_\_ } \text{KNO}_3 + \text{CO} = \text{CO}_2 + \text{ \_\_\_\_\_\_ } \text{NO}_2 + \text{K}_2\text{O}$
11.  $2 \text{CrI}_3 + \text{ \_\_\_\_\_\_ } \text{KOH} + 27 \text{Cl}_2 = 2 \text{K}_2\text{CrO}_4 + 6 \text{KIO}_4 + \text{ \_\_\_\_\_\_ } \text{KCl} + 32 \text{H}_2\text{O}$
12.  $\text{B}_{12} + \text{ \_\_\_\_\_\_ } \text{F}_2 = \text{ \_\_\_\_\_\_ } \text{BF}_3$
13.  $2 \text{Sn} + \text{ \_\_\_\_\_\_ } \text{NaOH} + 10 \text{H}_2\text{O} = 2 \text{Na(Sn(OH)}_6\text{)} + \text{ \_\_\_\_\_\_ } \text{H}_2$
14.  $\text{Sr(NO}_3\text{)}_2 + \text{ \_\_\_\_\_\_ } \text{NAOH} = \text{Sr(OH)}_2 + \text{ \_\_\_\_\_\_ } \text{NANO}_3$
15.  $2 \text{H}_2\text{S} + \text{ \_\_\_\_\_\_ } \text{O}_2 = 2 \text{H}_2\text{O} + \text{ \_\_\_\_\_\_ } \text{SO}_2$
16.  $3 \text{BaCl}_2\text{(aq)} + \text{ \_\_\_\_\_\_ } \text{H}_3\text{PO}_4\text{(aq)} = \text{Ba}_3\text{(PO}_4\text{)}_2\text{(s)} + \text{ \_\_\_\_\_\_ } \text{HCl(aq)}$
17.  $\text{CuCO}_3 \cdot \text{Cu(OH)}_2 + \text{ \_\_\_\_\_\_ } \text{NH}_4\text{OH} = 2 (\text{Cu(NH}_3\text{)}_4\text{(OH)}_2) + \text{CO}_2 + \text{ \_\_\_\_\_\_ } \text{H}_2\text{O}$
18.  $\text{PTCl}_4 + \text{ \_\_\_\_\_\_ } \text{XEF}_2 = \text{PTF}_6 + \text{ \_\_\_\_\_\_ } \text{ClF} + 5 \text{XE}$
19.  $\text{ \_\_\_\_\_\_ } \text{Al} + 6 \text{HCl} = 2 \text{AlCl}_3 + \text{ \_\_\_\_\_\_ } \text{H}_2$
20.  $10 \text{HSiCl}_3 + \text{ \_\_\_\_\_\_ } \text{H}_2\text{O} = \text{H}_{10}\text{Si}_{10}\text{O}_{15} + \text{ \_\_\_\_\_\_ } \text{HCl}$



# ANSWERS

1.  $2 \text{ Al(s)} + 6 \text{ HCl(aq)} = 2 \text{ AlCl}_3\text{(aq)} + 3 \text{ H}_2\text{(g)}$
2.  $6 \text{ CO}_2 + 6 \text{ H}_2\text{O} = \text{C}_6\text{H}_{12}\text{O}_6 + 6 \text{ O}_2$
3.  $2 \text{ Fe(OH)}_3\text{(s)} + 3 \text{ H}_2\text{SO}_4\text{(aq)} = \text{Fe}_2\text{(SO}_4\text{)}_3\text{(aq)} + 6 \text{ H}_2\text{O(l)}$
4.  $3 \text{ Sr(OH)}_2\text{(aq)} + 2 \text{ H}_3\text{PO}_4\text{(aq)} = \text{Sr}_3\text{(PO}_4\text{)}_2\text{(s)} + 6 \text{ H}_2\text{O(l)}$
5.  $4 \text{ C}_{10}\text{H}_{11}\text{NO}_2 + 49 \text{ O}_2 = 40 \text{ CO}_2 + 22 \text{ H}_2\text{O} + 4 \text{ NO}$
6.  $6 \text{ Li} + \text{N}_2 = 2 \text{ Li}_3\text{N}$
7.  $9 \text{ S}_1 + 2 \text{ Al}_3 = 3 \text{ Al}_2\text{S}_3$
8.  $7 \text{ P}_4 + 12 \text{ NaOH} + 24 \text{ H}_2\text{O} = 16 \text{ PH}_3 + 12 \text{ NaHPO}_3$
9.  $\text{CaSO}_4 + \text{SiO}_2 + 3 \text{ C} = \text{CaSiO}_3 + 3 \text{ CO} + \text{S}$
10.  $2 \text{ KNO}_3 + \text{CO} = \text{CO}_2 + 2 \text{ NO}_2 + \text{K}_2\text{O}$
11.  $2 \text{ CrI}_3 + 64 \text{ KOH} + 27 \text{ Cl}_2 = 2 \text{ K}_2\text{CrO}_4 + 6 \text{ KIO}_4 + 54 \text{ KCl} + 32 \text{ H}_2\text{O}$
12.  $\text{B}_{12} + 18 \text{ F}_2 = 12 \text{ BF}_3$
13.  $2 \text{ Sn} + 2 \text{ NaOH} + 10 \text{ H}_2\text{O} = 2 \text{ Na(Sn(OH)}_6\text{)} + 5 \text{ H}_2$
14.  $\text{Sr(NO}_3\text{)}_2 + 2 \text{ NaOH} = \text{Sr(OH)}_2 + 2 \text{ NaNO}_3$
15.  $2 \text{ H}_2\text{S} + 3 \text{ O}_2 = 2 \text{ H}_2\text{O} + 2 \text{ SO}_2$
16.  $3 \text{ BaCl}_2\text{(aq)} + 2 \text{ H}_3\text{PO}_4\text{(aq)} = \text{Ba}_3\text{(PO}_4\text{)}_2\text{(s)} + 6 \text{ HCl(aq)}$
17.  $\text{CuCO}_3 \cdot \text{Cu(OH)}_2 + 8 \text{ NH}_4\text{OH} = 2 \text{ (Cu(NH}_3\text{)}_4\text{(OH)}_2\text{)} + \text{CO}_2 + 7 \text{ H}_2\text{O}$
18.  $\text{PTCl}_4 + 5 \text{ XEF}_2 = \text{PTF}_6 + 4 \text{ ClF} + 5 \text{ XE}$
19.  $2 \text{ Al} + 6 \text{ HCl} = 2 \text{ AlCl}_3 + 3 \text{ H}_2$
20.  $10 \text{ HSiCl}_3 + 15 \text{ H}_2\text{O} = \text{H}_{10}\text{Si}_{10}\text{O}_{15} + 30 \text{ HCl}$



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