



BALANCE THE GIVEN CHEMICAL EQUATIONS

Worksheet - 35

1. $\text{CH}_4 + 3 \text{Br}_2 = 2 \text{CH}_3\text{Br} + \text{HBr}_2$
2. $3 \text{NaOH}(\text{aq}) + \text{Al}(\text{NO}_3)_3(\text{aq}) = \text{Al}(\text{OH})_3(\text{s}) + \text{NaNO}_3(\text{aq})$
3. $2 \text{C}_3\text{H}_6(\text{g}) + 9 \text{O}_2(\text{g}) = \text{CO}_2(\text{g}) + 6 \text{H}_2\text{O}(\text{g})$
4. $3 \text{I}^{-} + \text{ClO}^{-} + \text{H}^{+} = \text{I}_3^{-} + \text{Cl}^{-} + \text{H}_2\text{O}$
5. $2 \text{K} + 2 \text{H}_2\text{O} = \text{KOH} + \text{H}_2$
6. $\text{Mg} + \text{HCl} = \text{MgCl}_2 + \text{H}_2$
7. $4 \text{Cr} + \text{O}_2 = 2 \text{Cr}_2\text{O}_3$
8. $\text{Na}_2\text{CO}_3 + 2 \text{HCl} = \text{CO}_2 + \text{NaCl} + \text{H}_2\text{O}$
9. $2 \text{Si}_4\text{H}_{10} + \text{O}_2 = 8 \text{SiO}_2 + 10 \text{H}_2\text{O}$
10. $2 \text{Ga} + \text{H}_2\text{SO}_4 = \text{Ga}_2(\text{SO}_4)_3 + \text{H}_2$
11. $\text{CuSO}_4 \cdot 6\text{H}_2\text{O} = \text{CuSO}_4 + \text{H}_2\text{O}$
12. $2 \text{Li}(\text{s}) + \text{Cl}_2(\text{g}) = \text{LiCl}(\text{s})$
13. $3 \text{Au}_2\text{S} + \text{HNO}_3 = \text{Au}_2(\text{SO}_4)_3 + 4 \text{Au}(\text{NO}_3)_3 + \text{NO} + 12 \text{H}_2\text{O}$
14. $2 \text{ZnS} + \text{O}_2 = \text{ZnO} + 2 \text{SO}_2$
15. $5 \text{FeCl}_2 + \text{KMnO}_4 + \text{HCl} = 5 \text{FeCl}_3 + \text{MnCl}_2 + \text{H}_2\text{O} + \text{KCl}$
16. $\text{Ba}_3\text{N}_2 + \text{H}_2\text{O} = \text{Ba}(\text{OH})_2 + 2 \text{NH}_3$
17. $2 \text{Al} + \text{CuCl}_2 = 2 \text{AlCl}_3 + \text{Cu}$
18. $\text{CoS} + \text{NH}_4\text{NO}_3 = \text{Co}(\text{NO}_3)_2 + (\text{NH}_4)_2\text{S}$
19. $2 \text{NaF} + \text{Br}_2 = \text{NaBr} + \text{F}_2$
20. $\text{TeO}_2 + \text{CsOH} = \text{Cs}_2\text{TeO}_3 + \text{H}_2\text{O}$



ANSWERS

1. $2 \text{CH}_4 + 3 \text{Br}_2 = 2 \text{CH}_3\text{Br} + 2 \text{HBr}_2$
2. $3 \text{NaOH}(\text{aq}) + \text{Al}(\text{NO}_3)_3(\text{aq}) = \text{Al}(\text{OH})_3(\text{s}) + 3 \text{NaNO}_3(\text{aq})$
3. $2 \text{C}_3\text{H}_6(\text{g}) + 9 \text{O}_2(\text{g}) = 6 \text{CO}_2(\text{g}) + 6 \text{H}_2\text{O}(\text{g})$
4. $3 \text{I}^{(-)} + \text{ClO}^{(-)} + 2 \text{H}^{(+)} = \text{I}_3^{(-)} + \text{Cl}^{(-)} + \text{H}_2\text{O}$
5. $2 \text{K} + 2 \text{H}_2\text{O} = 2 \text{KOH} + \text{H}_2$
6. $\text{Mg} + 2 \text{HCl} = \text{MgCl}_2 + \text{H}_2$
7. $4 \text{Cr} + 3 \text{O}_2 = 2 \text{Cr}_2\text{O}_3$
8. $\text{Na}_2\text{CO}_3 + 2 \text{HCl} = \text{CO}_2 + 2 \text{NaCl} + \text{H}_2\text{O}$
9. $2 \text{Si}_4\text{H}_{10} + 13 \text{O}_2 = 8 \text{SiO}_2 + 10 \text{H}_2\text{O}$
10. $2 \text{Ga} + 3 \text{H}_2\text{SO}_4 = \text{Ga}_2(\text{SO}_4)_3 + 3 \text{H}_2$
11. $\text{CuSO}_4 \cdot 6\text{H}_2\text{O} = \text{CuSO}_4 + 6 \text{H}_2\text{O}$
12. $2 \text{Li}(\text{s}) + \text{Cl}_2(\text{g}) = 2 \text{LiCl}(\text{s})$
13. $3 \text{Au}_2\text{S} + 24 \text{HNO}_3 = \text{Au}_2(\text{SO}_4)_3 + 4 \text{Au}(\text{NO}_3)_3 + 12 \text{NO} + 12 \text{H}_2\text{O}$
14. $2 \text{ZnS} + 3 \text{O}_2 = 2 \text{ZnO} + 2 \text{SO}_2$
15. $5 \text{FeCl}_2 + \text{KMnO}_4 + 8 \text{HCl} = 5 \text{FeCl}_3 + \text{MnCl}_2 + 4 \text{H}_2\text{O} + \text{KCl}$
16. $\text{Ba}_3\text{N}_2 + 6 \text{H}_2\text{O} = 3 \text{Ba}(\text{OH})_2 + 2 \text{NH}_3$
17. $2 \text{Al} + 3 \text{CuCl}_2 = 2 \text{AlCl}_3 + 3 \text{Cu}$
18. $\text{CoS} + 2 \text{NH}_4\text{NO}_3 = \text{Co}(\text{NO}_3)_2 + (\text{NH}_4)_2\text{S}$
19. $2 \text{NaF} + \text{Br}_2 = 2 \text{NaBr} + \text{F}_2$
20. $\text{TeO}_2 + 2 \text{CsOH} = \text{Cs}_2\text{TeO}_3 + \text{H}_2\text{O}$



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