



BALANCE THE GIVEN CHEMICAL EQUATIONS

Worksheet - 4

1. $6 \text{H}_2\text{O} + \underline{\hspace{1cm}} \text{CO}_2 = \text{C}_6\text{H}_{12}\text{O}_6 + 6 \text{O}_2$
2. $2 (\text{CH}_2\text{CH}_2\text{OH})_2 + \underline{\hspace{1cm}} \text{O}_2 = 8 \text{CO}_2 + \underline{\hspace{1cm}} \text{H}_2\text{O}$
3. $6 \text{H}_2\text{O} + \underline{\hspace{1cm}} \text{CO}_2 = \text{C}_6\text{H}_{12}\text{O}_6 + 6 \text{O}_2$
4. $8 \text{Na}_2\text{CO}_3 + 4 \text{FeCr}_2\text{O}_4 + \underline{\hspace{1cm}} \text{O}_2 = 2 \text{Fe}_2\text{O}_3 + 8 \text{Na}_2\text{CrO}_4 + \underline{\hspace{1cm}} \text{CO}_2$
5. $\text{TiO}_2 + \underline{\hspace{1cm}} \text{Cl}_2 + 2 \text{C} = \text{TiCl}_4 + 2 \text{CO}$
6. $\underline{\hspace{1cm}} \text{HBr} + \text{MnO}_2 = \text{MnBr}_2 + \text{Br}_2 + \underline{\hspace{1cm}} \text{H}_2\text{O}$
7. $\text{N}_2\text{O}_5 + \text{H}_2\text{O} = \underline{\hspace{1cm}} \text{HNO}_3$
8. $5 (\text{NH}_4)_2\text{C}_2\text{O}_4 + 8 \text{H}_2\text{SO}_4 + \underline{\hspace{1cm}} \text{KMnO}_4 = 10 \text{CO}_2 + \underline{\hspace{1cm}} \text{MnSO}_4 + \text{K}_2\text{SO}_4 + 5 (\text{NH}_4)_2\text{SO}_4 + 8 \text{H}_2\text{O}$
9. $\text{Cu}(\text{NO}_3)_2 + \underline{\hspace{1cm}} \text{NaOH} = \text{Cu}(\text{OH})_2 + \underline{\hspace{1cm}} \text{NaNO}_3$
10. $((\text{NH}_4)_3\text{PO}_4) = \text{H}_3\text{PO}_4 + \underline{\hspace{1cm}} \text{NH}_3$
11. $\text{Zn} + \underline{\hspace{1cm}} \text{H}^{(+)} = \text{Zn}^{(2+)} + \text{H}_2$
12. $8 \text{Al} + \underline{\hspace{1cm}} \text{Fe}_3\text{O}_4 = 4 \text{Al}_2\text{O}_3 + \underline{\hspace{1cm}} \text{Fe}$
13. $\text{Mg} + \underline{\hspace{1cm}} \text{HCl} = \text{MgCl}_2 + \text{H}_2$
14. $\text{BaCl}_2 + \text{H}_2\text{SO}_4 = \text{BaSO}_4 + \underline{\hspace{1cm}} \text{HCl}$
15. $\text{Sn} + \underline{\hspace{1cm}} \text{NaOH} = \text{Na}_2\text{SnO}_2 + \text{H}_2$
16. $\text{Sn}_2\text{O} + \text{H}_2 = \underline{\hspace{1cm}} \text{Sn} + \text{H}_2\text{O}$
17. $\underline{\hspace{1cm}} \text{Sr} + \text{P}_4 = 2 \text{Sr}_3\text{P}_2$
18. $4 \text{Al} + \underline{\hspace{1cm}} \text{O}_2 = 2 \text{Al}_2\text{O}_3$
19. $3 \text{NO}_2 + \text{H}_2\text{O} = \underline{\hspace{1cm}} \text{HNO}_3 + \text{NO}$
20. $10 \text{K} + 2 \text{KNO}_3 = \underline{\hspace{1cm}} \text{K}_2\text{O} + \text{N}_2$



ANSWERS

1. $6 \text{H}_2\text{O} + 6 \text{CO}_2 = \text{C}_6\text{H}_{12}\text{O}_6 + 6 \text{O}_2$
2. $2 (\text{CH}_2\text{CH}_2\text{OH})_2 + 11 \text{O}_2 = 8 \text{CO}_2 + 10 \text{H}_2\text{O}$
3. $6 \text{H}_2\text{O} + 6 \text{CO}_2 = \text{C}_6\text{H}_{12}\text{O}_6 + 6 \text{O}_2$
4. $8 \text{Na}_2\text{CO}_3 + 4 \text{FeCr}_2\text{O}_4 + 7 \text{O}_2 = 2 \text{Fe}_2\text{O}_3 + 8 \text{Na}_2\text{CrO}_4 + 8 \text{CO}_2$
5. $\text{TiO}_2 + 2 \text{Cl}_2 + 2 \text{C} = \text{TiCl}_4 + 2 \text{CO}$
6. $4 \text{HBr} + \text{MnO}_2 = \text{MnBr}_2 + \text{Br}_2 + 2 \text{H}_2\text{O}$
7. $\text{N}_2\text{O}_5 + \text{H}_2\text{O} = 2 \text{HNO}_3$
8. $5 (\text{NH}_4)_2\text{C}_2\text{O}_4 + 8 \text{H}_2\text{SO}_4 + 2 \text{KMnO}_4 = 10 \text{CO}_2 + 2 \text{MnSO}_4 + \text{K}_2\text{SO}_4 + 5 (\text{NH}_4)_2\text{SO}_4 + 8 \text{H}_2\text{O}$
9. $\text{Cu}(\text{NO}_3)_2 + 2 \text{NaOH} = \text{Cu}(\text{OH})_2 + 2 \text{NaNO}_3$
10. $(\text{NH}_4)_3\text{PO}_4 = \text{H}_3\text{PO}_4 + 3 \text{NH}_3$
11. $\text{Zn} + 2 \text{H}^{(+)} = \text{Zn}^{(2+)} + \text{H}_2$
12. $8 \text{Al} + 3 \text{Fe}_3\text{O}_4 = 4 \text{Al}_2\text{O}_3 + 9 \text{Fe}$
13. $\text{Mg} + 2 \text{HCl} = \text{MgCl}_2 + \text{H}_2$
14. $\text{BaCl}_2 + \text{H}_2\text{SO}_4 = \text{BaSO}_4 + 2 \text{HCl}$
15. $\text{Sn} + 2 \text{NaOH} = \text{Na}_2\text{SnO}_2 + \text{H}_2$
16. $\text{Sn}_2\text{O} + \text{H}_2 = 2 \text{Sn} + \text{H}_2\text{O}$
17. $6 \text{Sr} + \text{P}_4 = 2 \text{Sr}_3\text{P}_2$
18. $4 \text{Al} + 3 \text{O}_2 = 2 \text{Al}_2\text{O}_3$
19. $3 \text{NO}_2 + \text{H}_2\text{O} = 2 \text{HNO}_3 + \text{NO}$
20. $10 \text{K} + 2 \text{KNO}_3 = 6 \text{K}_2\text{O} + \text{N}_2$



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