



BALANCE THE GIVEN CHEMICAL EQUATIONS

Worksheet - 70

1. ____ $\text{Cu} + 8 \text{HNO}_3 = 3 \text{Cu}(\text{NO}_3)_2 + \text{____} \text{NO} + 4 \text{H}_2\text{O}$
2. $4 \text{C}_2\text{H}_5\text{O}_2 + \text{____} \text{O}_2 = 4 \text{CO}_2 + \text{____} \text{H}_2\text{O}$
3. ____ $\text{FeCl}_2 + \text{KMnO}_4 + 8 \text{HCl} = \text{____} \text{FeCl}_3 + \text{MnCl}_2 + 4 \text{H}_2\text{O} + \text{KCl}$
4. $2 \text{HNO}_3 + \text{____} \text{H}_2\text{S} = 2 \text{NO} + \text{____} \text{S} + 4 \text{H}_2\text{O}$
5. ____ $\text{CO}_2 + 6 \text{H}_2\text{O} = \text{C}_6\text{H}_{12}\text{O}_6 + \text{____} \text{O}_2$
6. $5 \text{HClO}_3 + \text{____} \text{P} + 9 \text{H}_2\text{O} = \text{____} \text{H}_3\text{PO}_4 + 5 \text{HCl}$
7. $\text{H}_2\text{SO}_4 + \text{____} \text{HI} = \text{S} + 3 \text{I}_2 + \text{____} \text{H}_2\text{O}$
8. ____ $\text{Al} + 3 \text{Fe}_3\text{O}_4 = \text{____} \text{Al}_2\text{O}_3 + 9 \text{Fe}$
9. ____ $\text{HCOOH} + \text{O}_2 = 2 \text{CO}_2 + \text{____} \text{H}_2\text{O}$
10. $\text{Na}_2\text{S}_2\text{O}_3 + \text{____} \text{HCl} = \text{S} + \text{SO}_2 + \text{____} \text{NaCl} + \text{H}_2\text{O}$
11. ____ $\text{MnO}_4^{\{-\}} + 80 \text{NO}_2^{\{-\}} + 60 \text{H}^{\{+\}} = 20 \text{Mn}^{\{2+\}} + \text{____} \text{NO}_3^{\{-\}} + 3 \text{H}_2\text{O}$
12. $2 \text{ZnS} + \text{____} \text{O}_2 = 2 \text{ZnO} + \text{____} \text{SO}_2$
13. ____ $\text{TeCl}_2 + 2 \text{H}_2\text{O} = \text{TeO}_2 + \text{____} \text{Te} + 2 \text{H}_2\text{TeCl}_6$
14. $4 \text{NH}_3 + \text{____} \text{O}_2 = 4 \text{NO}_2 + \text{____} \text{H}_2\text{O}$
15. ____ $\text{NaBH}_4 + \text{H}_2\text{SO}_4 = \text{B}_2\text{H}_6 + \text{____} \text{H}_2 + \text{Na}_2\text{SO}_4$
16. ____ $\text{Br}_2(\text{l}) + \text{I}_2(\text{s}) = \text{____} \text{IBr}_3(\text{g})$
17. ____ $\text{KClO}_3 = 2 \text{KCl} + \text{____} \text{O}_2$
18. $3 \text{I}_2\text{O}_5 + \text{____} \text{H}_2\text{S} = \text{____} \text{I}_2 + 5 \text{SO}_2 + 5 \text{H}_2\text{O}$
19. ____ $\text{Mg} + 2 \text{H}_3\text{PO}_4 = \text{Mg}_3(\text{PO}_4)_2 + \text{____} \text{H}_2$
20. ____ $\text{HI} + \text{Sr}(\text{OH})_2 = \text{SrI}_2 + \text{____} \text{H}_2\text{O}$



ANSWERS

1. $3 \text{ Cu} + 8 \text{ HNO}_3 = 3 \text{ Cu}(\text{NO}_3)_2 + 2 \text{ NO} + 4 \text{ H}_2\text{O}$
2. $4 \text{ C}_1\text{H}_5\text{O}_2 + 5 \text{ O}_2 = 4 \text{ CO}_2 + 10 \text{ H}_2\text{O}$
3. $5 \text{ FeCl}_2 + \text{KMnO}_4 + 8 \text{ HCl} = 5 \text{ FeCl}_3 + \text{MnCl}_2 + 4 \text{ H}_2\text{O} + \text{KCl}$
4. $2 \text{ HNO}_3 + 3 \text{ H}_2\text{S} = 2 \text{ NO} + 3 \text{ S} + 4 \text{ H}_2\text{O}$
5. $6 \text{ CO}_2 + 6 \text{ H}_2\text{O} = \text{C}_6\text{H}_{12}\text{O}_6 + 6 \text{ O}_2$
6. $5 \text{ HClO}_3 + 6 \text{ P} + 9 \text{ H}_2\text{O} = 6 \text{ H}_3\text{PO}_4 + 5 \text{ HCl}$
7. $\text{H}_2\text{SO}_4 + 6 \text{ HI} = \text{S} + 3 \text{ I}_2 + 4 \text{ H}_2\text{O}$
8. $8 \text{ Al} + 3 \text{ Fe}_3\text{O}_4 = 4 \text{ Al}_2\text{O}_3 + 9 \text{ Fe}$
9. $2 \text{ HCOOH} + \text{O}_2 = 2 \text{ CO}_2 + 2 \text{ H}_2\text{O}$
10. $\text{Na}_2\text{S}_2\text{O}_3 + 2 \text{ HCl} = \text{S} + \text{SO}_2 + 2 \text{ NaCl} + \text{H}_2\text{O}$
11. $20 \text{ MnO}_4^{\{-\}} + 80 \text{ NO}_2^{\{-\}} + 60 \text{ H}^{\{+\}} = 20 \text{ Mn}^{\{2+\}} + 80 \text{ NO}_3^{\{-\}} + 3 \text{ H}_2\text{O}$
12. $2 \text{ ZnS} + 3 \text{ O}_2 = 2 \text{ ZnO} + 2 \text{ SO}_2$
13. $6 \text{ TeCl}_2 + 2 \text{ H}_2\text{O} = \text{TeO}_2 + 3 \text{ Te} + 2 \text{ H}_2\text{TeCl}_6$
14. $4 \text{ NH}_3 + 7 \text{ O}_2 = 4 \text{ NO}_2 + 6 \text{ H}_2\text{O}$
15. $2 \text{ NaBH}_4 + \text{H}_2\text{SO}_4 = \text{B}_2\text{H}_6 + 2 \text{ H}_2 + \text{Na}_2\text{SO}_4$
16. $3 \text{ Br}_2(\text{l}) + \text{I}_2(\text{s}) = 2 \text{ IBr}_3(\text{g})$
17. $2 \text{ KClO}_3 = 2 \text{ KCl} + 3 \text{ O}_2$
18. $3 \text{ I}_2\text{O}_5 + 5 \text{ H}_2\text{S} = 3 \text{ I}_2 + 5 \text{ SO}_2 + 5 \text{ H}_2\text{O}$
19. $3 \text{ Mg} + 2 \text{ H}_3\text{PO}_4 = \text{Mg}_3(\text{PO}_4)_2 + 3 \text{ H}_2$
20. $2 \text{ HI} + \text{Sr}(\text{OH})_2 = \text{SrI}_2 + 2 \text{ H}_2\text{O}$



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