



BALANCE THE GIVEN CHEMICAL EQUATIONS

Worksheet - 90

1. ____ Fe + 3 Na₂SO₄ = Fe₂(SO₄)₃ + ____ Na
2. 6 SrCO₃ + Ti₂ + ____ O₂ = 2 Sr₃TiO₇ + ____ CO₂
3. ____ FeCl₂ + KMnO₄ + 8 HCl = ____ FeCl₃ + MnCl₂ + 4 H₂O + KCl
4. ____ NOCl = ____ NO + Cl₂
5. Cr₂O₃ + ____ Cl₂ + 3 C = 2 CrCl₃ + ____ CO
6. ____ C₃H₈O + Cr₂O₇^{-2} + 8 H^{+} = ____ C₃H₆O + 2 Cr^{3+} + 7 H₂O
7. SO₂Cl₂ + ____ H₂O = H₂SO₄ + ____ HCl
8. ____ S + 40 HNO₃ = ____ H₂SO₄ + 40 NO₂ + H₂O
9. B₂H₆ + ____ H₂O = 2 H₃BO₃ + ____ H₂
10. ____ CrI₃ + 64 KOH + 27 Cl₂ = ____ K₂CrO₄ + 6 KIO₄ + 54 KCl + 32 H₂O
11. ____ C₁₂H₁₄ + 50 O₂ = ____ C₁₀H₂₀ + 50 CO₂
12. ____ K₂O + 2 H₃PO₄ = 3 H₂O + ____ K₃PO₄
13. Ca₃P₂ + ____ H₂O = 3 Ca(OH)₂ + ____ PH₃
14. 4 HCl + ____ As₂O₃ + 4 NaNO₃ + 7 H₂O = ____ NO + 6 H₃AsO₄ + 4 NaCl
15. ____ NiO(OH) + 3 Cd + 4 H₂O = ____ Ni(OH)₂ + 3 Cd(OH)₂
16. BF₃(aq) + ____ H₂O(l) = ____ HF(aq) + H₃BO₃(aq)
17. ____ C₁₀H₁₁NO₂ + 49 O₂ = 40 CO₂ + 22 H₂O + ____ NO
18. ____ Al(s) + 3 Cl₂(g) = ____ AlCl₃(s)
19. ____ Cu(s) + S₈(s) = ____ CuS(s)
20. 3 BaBr₂ + ____ Na₃(PO₄) = Ba₃(PO₄)₂ + ____ NaBr



ANSWERS

1. $2 \text{ Fe} + 3 \text{ Na}_2\text{SO}_4 = \text{Fe}_2(\text{SO}_4)_3 + 6 \text{ Na}$
2. $6 \text{ SrCO}_3 + \text{Ti}_2 + 4 \text{ O}_2 = 2 \text{ Sr}_3\text{TiO}_7 + 6 \text{ CO}_2$
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. $2 \text{ NOCl} = 2 \text{ NO} + \text{Cl}_2$
5. $\text{Cr}_2\text{O}_3 + 3 \text{ Cl}_2 + 3 \text{ C} = 2 \text{ CrCl}_3 + 3 \text{ CO}$
6. $3 \text{ C}_3\text{H}_8\text{O} + \text{Cr}_2\text{O}_7^{(-2)} + 8 \text{ H}^{(+)} = 3 \text{ C}_3\text{H}_6\text{O} + 2 \text{ Cr}^{(3+)} + 7 \text{ H}_2\text{O}$
7. $\text{SO}_2\text{Cl}_2 + 2 \text{ H}_2\text{O} = \text{H}_2\text{SO}_4 + 2 \text{ HCl}$
8. $10 \text{ S} + 40 \text{ HNO}_3 = 10 \text{ H}_2\text{SO}_4 + 40 \text{ NO}_2 + \text{H}_2\text{O}$
9. $\text{B}_2\text{H}_6 + 6 \text{ H}_2\text{O} = 2 \text{ H}_3\text{BO}_3 + 6 \text{ H}_2$
10. $2 \text{ CrI}_3 + 64 \text{ KOH} + 27 \text{ Cl}_2 = 2 \text{ K}_2\text{CrO}_4 + 6 \text{ KIO}_4 + 54 \text{ KCl} + 32 \text{ H}_2\text{O}$
11. $10 \text{ C}_{12}\text{H}_{14} + 50 \text{ O}_2 = 7 \text{ C}_{10}\text{H}_{20} + 50 \text{ CO}_2$
12. $3 \text{ K}_2\text{O} + 2 \text{ H}_3\text{PO}_4 = 3 \text{ H}_2\text{O} + 2 \text{ K}_3\text{PO}_4$
13. $\text{Ca}_3\text{P}_2 + 6 \text{ H}_2\text{O} = 3 \text{ Ca}(\text{OH})_2 + 2 \text{ PH}_3$
14. $4 \text{ HCl} + 3 \text{ As}_2\text{O}_3 + 4 \text{ NaNO}_3 + 7 \text{ H}_2\text{O} = 4 \text{ NO} + 6 \text{ H}_3\text{AsO}_4 + 4 \text{ NaCl}$
15. $2 \text{ NiO}(\text{OH}) + 3 \text{ Cd} + 4 \text{ H}_2\text{O} = 2 \text{ Ni}(\text{OH})_2 + 3 \text{ Cd}(\text{OH})_2$
16. $\text{BF}_3(\text{aq}) + 3 \text{ H}_2\text{O}(\text{l}) = 3 \text{ HF}(\text{aq}) + \text{H}_3\text{BO}_3(\text{aq})$
17. $4 \text{ C}_{10}\text{H}_{11}\text{NO}_2 + 49 \text{ O}_2 = 40 \text{ CO}_2 + 22 \text{ H}_2\text{O} + 4 \text{ NO}$
18. $2 \text{ Al}(\text{s}) + 3 \text{ Cl}_2(\text{g}) = 2 \text{ AlCl}_3(\text{s})$
19. $8 \text{ Cu}(\text{s}) + \text{S}_8(\text{s}) = 8 \text{ CuS}(\text{s})$
20. $3 \text{ BaBr}_2 + 2 \text{ Na}_3(\text{PO}_4) = \text{Ba}_3(\text{PO}_4)_2 + 6 \text{ NaBr}$



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