BALANCE THE GIVEN CHEMICAL EQUATIONS

Worksheet - 37

1. _____ $NaHCO_3 = Na_2CO_3 + H_2O + CO_2$
2. _____ $Na_2S_2O_3 + I_2 =$ _____ $NaI + Na_2S_4O_6$
3. $2\ (CH_3(CH_2)_6CH_3) + 25\ O_2 =$ _____ $CO_2 + 18\ H_2O$
4. _____ $KOH + H_2SO_4 = K_2SO_4 +$ _____ H_2O
5. $3\ CuS +$ _____ $HNO_3 = 3\ CuO + 3\ S +$ _____ $NO + H_2O$
6. $2\ H_{20} +$ _____ $CO_2 =$ _____ $C_7H_8 + 35\ O_2$
7. $2\ Al +$ _____ $NaOH + 6\ H_2O =$ _____ $NaAl(OH)_4 + 3\ H_2$
8. $3\ O_2 =$ _____ O_3
9. $3\ CaCO_3 +$ _____ $H_3PO_4 = Ca_3(PO_4)_2 +$ _____ $CO_2 + 3\ H_2O$
10. $2\ NaAt +$ _____ $Cl_2 =$ _____ $NaCl_2 + At_2$
11. $NiBr_2 + K_2CO_3 = NiCO_3 +$ _____ KBr
12. $4\ NaCl +$ _____ $NaClO_3 + 6\ H_2SO_4 = 3\ Cl_2 +$ _____ $NaSO_4 + 6\ H_2O$
13. $BCl_3(g) + 3\ H_2O(l) =$ _____ $HCl(g) + H_3BO_3(s)$
14. $[(CH_3CO_2)_2Cu*H_2O]_2 +$ _____ $H_2NCH_2CO_2H =$ _____ $Cu(H_2NCH_2CO_2)_2 + 2\ H_2O + 4\ CH_3COOH$
15. $Al_2(SO_4)_3 +$ _____ $NaOH = 3\ Na_2SO_4 +$ _____ $Al(OH)_3$
16. $2\ C_{10}H_{15}NO +$ _____ $HI_3 + P_4 = 2\ C_{10}H_{15}N +$ _____ $PI_3 + 2\ H_2O$
17. $MnO_4^{\{2-\}} + 2\ SO_3^{\{2-\}} +$ _____ $H^{\{+\}} =$ _____ $SO_4^{\{2-\}} + Mn^{\{2+\}} + 2\ H_2O$
18. $6\ KMnO_4 +$ _____ $H_2SO_4 + 10\ Sb = 3\ K_2SO_4 + 6\ MnSO_4 +$ _____ $Sb_2O_3 + 9\ H_2O$
19. $Al_2S_3 +$ _____ $H_2O =$ _____ $Al(OH)_3 + 3\ H_2S$
20. $2\ KLCO_3 =$ _____ $KCL + 3\ O_2$

ANSWERS

1. $2\ NaHCO_3 = Na_2CO_3 + H_2O + CO_2$
2. $2\ Na_2S_2O_3 + I_2 = 2\ NaI + Na_2S_4O_6$
3. $2\ (CH_3(CH_2)_6CH_3) + 25\ O_2 = 16\ CO_2 + 18\ H_2O$
4. $2\ KOH + H_2SO_4 = K_2SO_4 + 2\ H_2O$
5. $3\ CuS + 2\ HNO_3 = 3\ CuO + 3\ S + 2\ NO + H_2O$
6. $2\ H_{20} + 35\ CO_2 = 5\ C_7H_8 + 35\ O_2$
7. $2\ Al + 2\ NaOH + 6\ H_2O = 2\ NaAl(OH)_4 + 3\ H_2$
8. $3\ O_2 = 2\ O_3$
9. $3\ CaCO_3 + 2\ H_3PO_4 = Ca_3(PO_4)_2 + 3\ CO_2 + 3\ H_2O$
10. $2\ NaAt + 2\ Cl_2 = 2\ NaCl_2 + At_2$
11. $NiBr_2 + K_2CO_3 = NiCO_3 + 2\ KBr$
12. $4\ NaCl + 2\ NaClO_3 + 6\ H_2SO_4 = 3\ Cl_2 + 6\ NaSO_4 + 6\ H_2O$
13. $BCl_3(g) + 3\ H_2O(l) = 3\ HCl(g) + H_3BO_3(s)$
14. $[(CH_3CO_2)_2Cu*H_2O]_2 + 4\ H_2NCH_2CO_2H = 2\ Cu(H_2NCH_2CO_2)_2 + 2\ H_2O + 4\ CH_3COOH$
15. $Al_2(SO_4)_3 + 6\ NaOH = 3\ Na_2SO_4 + 2\ Al(OH)_3$
16. $2\ C_{10}H_{15}NO + 4\ HI_3 + P_4 = 2\ C_{10}H_{15}N + 4\ PI_3 + 2\ H_2O$
17. $MnO_4^{\{2-\}} + 2\ SO_3^{\{2-\}} + 4\ H^{\{+\}} = 2\ SO_4^{\{2-\}} + Mn^{\{2+\}} + 2\ H_2O$
18. $6\ KMnO_4 + 9\ H_2SO_4 + 10\ Sb = 3\ K_2SO_4 + 6\ MnSO_4 + 5\ Sb_2O_3 + 9\ H_2O$
19. $Al_2S_3 + 6\ H_2O = 2\ Al(OH)_3 + 3\ H_2S$

20. $2\ KLCO_3 = 2\ KCL + 3\ O_2$

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