

### BALANCE THE GIVEN CHEMICAL EQUATIONS Worksheet - 40

- 1.  $MnO_4^{\{-\}} + \__Fe^{\{2+\}} + 8 H^{\{+\}} = Mn^{\{+2\}} + \__Fe^{\{3+\}} + 4 H_2O$
- 2. CH<sub>4</sub> + 2 O<sub>2</sub> = CO<sub>2</sub> + \_\_\_\_ H<sub>2</sub>O
- 3. SO<sub>2</sub>Cl<sub>2</sub> + \_\_\_\_ HBr = H<sub>2</sub>S + \_\_\_\_ HCl + 4 Br<sub>2</sub> + 2 H<sub>2</sub>O
- 4.  $Co(C_2H_3O_2)_2*4H_2O = Co(C_2H_3O_2)_2 + \____H_2O$
- 5.  $2 C_2 H_6(g) + \___ O_2(g) = \___ H_2 O(g) + 4 CO_2(g)$
- 6. K<sub>2</sub>CO<sub>3</sub> + \_\_\_\_ HNO<sub>3</sub> = \_\_\_\_ KNO<sub>3</sub> + H<sub>2</sub>O + CO<sub>2</sub>
- 7.  $Cl_2O_7 + H_2O = \___HCIO_4$
- 8.  $Pb(NO_3)_2 + K_2CrO_4 = PbCrO_4 + \____ KNO_3$
- 9. CuSO<sub>4</sub>\*5H<sub>2</sub>O = CuSO<sub>4</sub> + \_\_\_\_\_ H<sub>2</sub>O
- 10.  $CaCO_3(s) + \____ HCI(ac) = H_2O(I) + CO_2(g) + CaCI_2(aq)$
- 11.  $CH_3CH_2CH_2CH(OH)CH_2OH + ____O_2 = 5 CO_2 + ____H_2O$
- 12.  $AI_4C_3 + 12 H_2O =$ \_\_\_\_  $AI(OH)_3 + 3 CH_4$
- 13.  $CaCO_3 + \___ HCl = CaCl_2 + CO_2 + H_2O$
- 14.  $Sr(NO_3)_2 + Li_2SO_4 = SrSO_4 + 2 LiNO_3$
- 15. 2 Al + \_\_\_\_  $H_2SO_4 = Al_2(SO_4)_3 + 3 H_2$
- 16. \_\_\_\_\_ HI + Ca(OH)<sub>2</sub> = \_\_\_\_\_ H<sub>2</sub>O + Cal<sub>2</sub>
- 17. 2 K<sub>3</sub>PO<sub>4</sub> + \_\_\_\_ CaCl<sub>2</sub> = Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub> + 6 KCl
- 18. 10  $HSiCl_3 + \___ H_2O = H_{10}Si_{10}O_{15} + 30 HCI$
- 19. NaOH + NaNO<sub>2</sub> + \_\_\_\_\_ Al + H<sub>2</sub>O = NH<sub>3</sub> + \_\_\_\_\_ NaAlO<sub>2</sub>
- 20.  $C_{10}H_{15}NO + \____ HI_3 = C_{10}H_{15}N + \____ I_2 + H_2O$



# ANSWERS

- 1.  $MnO_4^{\{-\}} + 5 Fe^{\{2+\}} + 8 H^{\{+\}} = Mn^{\{+2\}} + 5 Fe^{\{3+\}} + 4 H_2O$
- 2.  $CH_4 + 2 O_2 = CO_2 + 2 H_2O$
- 3.  $SO_2Cl_2 + 8 HBr = H_2S + 2 HCl + 4 Br_2 + 2 H_2O$
- 4.  $Co(C_2H_3O_2)_2*4H_2O = Co(C_2H_3O_2)_2 + 4H_2O$
- 5.  $2 C_2 H_6(g) + 7 O_2(g) = 6 H_2 O(g) + 4 CO_2(g)$
- 6.  $K_2CO_3 + 2 HNO_3 = 2 KNO_3 + H_2O + CO_2$
- 7.  $Cl_2O_7 + H_2O = 2 HClO_4$
- 8.  $Pb(NO_3)_2 + K_2CrO_4 = PbCrO_4 + 2 KNO_3$
- 9.  $CuSO_4*5H_2O = CuSO_4 + 5 H_2O$
- 10.  $CaCO_3(s) + 2 HCl(ac) = H_2O(l) + CO_2(g) + CaCl_2(aq)$
- 11.  $CH_3CH_2CH_2CH(OH)CH_2OH + 7 O_2 = 5 CO_2 + 6 H_2O$
- 12.  $AI_4C_3 + 12 H_2O = 4 AI(OH)_3 + 3 CH_4$
- 13.  $CaCO_3 + 2 HCI = CaCI_2 + CO_2 + H_2O$
- 14.  $Sr(NO_3)_2 + Li_2SO_4 = SrSO_4 + 2 LiNO_3$
- 15. 2 Al + 3  $H_2SO_4 = Al_2(SO_4)_3 + 3 H_2$
- 16. 2 HI + Ca(OH)<sub>2</sub> = 2 H<sub>2</sub>O + Cal<sub>2</sub>
- 17. 2 K<sub>3</sub>PO<sub>4</sub> + 3 CaCl<sub>2</sub> = Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub> + 6 KCl
- 18. 10  $HSiCl_3$  + 15  $H_2O$  =  $H_{10}Si_{10}O_{15}$  + 30 HCl
- 19. NaOH + NaNO<sub>2</sub> + 2 Al +  $H_2O = NH_3 + 2 NaAlO_2$
- 20.  $C_{10}H_{15}NO + 2 HI_3 = C_{10}H_{15}N + 3 I_2 + H_2O$



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Feel free to email us at contactgosciencegirls@gmail.com for any further questions and suggestions. We would love to hear from you. We promise to respond back as soon as we can.