Science 10 Balancing Chemical Equations #1 (Easy) SOLUTION KEY

Balance the following chemical formulas:

1. $2Cu + O_2$ ----------> $2CuO$
2. $2H_2O$ ----------> $2H_2 + O_2$
3. $3Fe + 4H_2O$ ----------> $4H_2 + Fe_3O_4$
4. $2AsCl_3 + 3H_2S$ ----------> $As_2S_3 + 6HCl$
5. $2KNO_3$ ----------> $2KNO_2 + O_2$
6. $Fe_2O_3 + 3H_2$ ----------> $2Fe + 3H_2O$
7. $CaCO_3$ ----------> $CaO + CO_2$ (balanced)
8. $8Fe + S_8$ ----------> $8FeS$
9. $H_2S + 2K(OH)$ ----------> $2H(OH) + K_2S$
10. $2NaCl$ ----------> $2Na + Cl_2$
11. $Ca(OH)_2 + 2NH_4Cl$ --------> $2NH_4OH + CaCl_2$
12. $4C + 2SO_2$ ----------> $CS_2 + 4CO$
13. $V_2O_5 + 5Ca$ ----------> $5CaO + 2V$
14. $4Al + 3O_2$ ----------> $2Al_2O_3$
15. $3NO_2 + H_2O$ ----------> $2HNO_3 + NO$
16.* $3LiAlH_4 + 4BF_3$ --------> $3LiF + 3AlF_3 + 2B_2H_6$

Science 10 Balancing Chemical Equations #2 (Moderate) Solutions

Balance the following chemical formulas

1. $2Fe + 3H_2SO_4 \rightarrow Fe_2(SO_4)_3 + 3H_2$
2. $2C_2H_6 + 7O_2 \rightarrow 6H_2O + 4CO_2$
3. $3KOH + H_3PO_4 \rightarrow K_3PO_4 + 3H_2O$
4. $SnO_2 + 2H_2 \rightarrow Sn + 2H_2O$
5. $2NH_3 + 2O_2 \rightarrow NO + 3H_2O$
6. $2KNO_3 + H_2CO_3 \rightarrow K_2CO_3 + 2HNO_3$
7. $B_2Br_6 + 6HNO_3 \rightarrow 2B(NO_3)_3 + 6HBr$
8. $2BF_3 + 3Li_2SO_3 \rightarrow \_B_2(SO_3)_3 + 6LiF$
9. $4(NH_4)_3PO_4 + 3Pb(NO_3)_4 \rightarrow Pb_3(PO_4)_4 + 12NH_4NO_3$
10. $SeCl_6 + O_2 \rightarrow SeO_2 + 3Cl_2$

Science 10 Balancing Chemical Equations #3 Moderate SOLUTIONS

Balance the following chemical formulas

1. $\_\_C_3H_8 + \_5\_O_2 \rightarrow 3CO_2 + \_4\_ H_2O$
2. $\_2\_Al + \_\_Fe_3N_2 \rightarrow \_2AlN + 3\_Fe$
3. $\_2\ Na + \_\_Cl_2 \rightarrow 2\ NaCl$
4. $2\_H_2O_2 \rightarrow 2\_H_2O + \_\_O_2$
5. $\_\_C_6H_{12}O_6 + \_6O_2 \rightarrow \_6H_2O + \_6CO_2$
6. $\_4H_2O + \_7CO_2 \rightarrow \_\_C_7H_8 + 9\_O_2$
7. $\_2NaClO_3 \rightarrow \_2\ NaCl + \_3O_2$
8. $\_4(NH_4)_3PO_4 + \_3Pb(NO_3)_4 \rightarrow Pb(PO_4)_4 + \_12NH_4NO_3$
9. $\_2BF_3 + \_3Li_2SO_3 \rightarrow B_2(SO_3)_3 + \_6LiF$
10. $\_4C_7H_{17} + \ 45O_2 \rightarrow 28\_CO_2 + 34H_2O$
11. $3CaCO_3 + \_2H_3PO_4 \rightarrow Ca_3(PO_4)_2 + 3\ H_2CO_3$
12. $\_8Ag2S \rightarrow \_16\ Ag + \_\_\_S8$
13. $\_3KBr + \_\_Fe(OH)_3 \rightarrow \_3KOH + \_\_FeBr_3$
14. $\_2KNO_3 + \_\_H_2CO_3 \rightarrow \_\_K_2CO_3 + \_2HNO_3$
15. $\_\_Pb(OH)_4 + \_2Cu_2O \rightarrow PbO_2 + \_4CuOH$
16. $\_\_Cr(NO_2)_2 + \_\_\ (NH_4)_2SO_4 \rightarrow \_\_CrSO_4 + \_2\ NH_4NO_2$
17. $6\_KOH + \_\_CO_3(PO4)_2 \rightarrow 2K_3PO_4 + \_3Co(OH)_2$
18. $\_3Sn(NO_2)_4 + \_\_\_Pt_3N_4 \rightarrow \_\_Sn_3N_4 + \_3Pt(NO_2)_4$
19. $\_\_B_2Br_6 + \_6HNO_3 \rightarrow 2B(NO_3)_3 + \_6HBr$
20. $\_3ZnS + 2AlP \rightarrow Zn_3P_2 + \_\_Al_2S_3$