

Balancing Chemical Equations

The following chemical equations are unbalanced. Balance them by putting the appropriate number in front of the formula.

- ① _____ AlBr_3 + _____ K \rightarrow _____ KBr + _____ Al
- ② _____ FeO + _____ PdF_2 \rightarrow _____ FeF_2 + _____ PdO
- ③ _____ P_4 + _____ Br_2 \rightarrow _____ PBr_3
- ④ _____ LiCl + _____ Br_2 \rightarrow _____ LiBr + _____ Cl_2
- ⑤ _____ PbBr_2 + _____ HCl \rightarrow _____ HBr + _____ PbCl_2
- ⑥ _____ CoBr_3 + _____ CaSO_4 \rightarrow _____ CaBr_2 + _____ $\text{Co}_2(\text{SO}_4)_3$
- ⑦ _____ Na_3P + _____ CaF_2 \rightarrow _____ NaF + _____ Ca_3P_2
- ⑧ _____ Mn + _____ HI \rightarrow _____ H_2 + _____ MnI_3
- ⑨ _____ Li_3PO_4 + _____ NaBr \rightarrow _____ Na_3PO_4 + _____ LiBr
- ⑩ _____ CaF_2 + _____ Li_2SO_4 \rightarrow _____ CaSO_4 + _____ LiF
- ⑪ _____ HBr + _____ $\text{Mg}(\text{OH})_2$ \rightarrow _____ MgBr_2 + _____ H_2O
- ⑫ _____ LiNO_3 + _____ CaBr_2 \rightarrow _____ MgBr_2 + _____ H_2O
- ⑬ _____ AgNO_3 + _____ Li \rightarrow _____ LiNO_3 + _____ Ag
- ⑭ _____ $\text{Si}(\text{OH})_4$ + _____ NaBr \rightarrow _____ SiBr_4 + _____ NaOH
- ⑮ _____ NaCN + _____ CuCO_3 \rightarrow _____ Na_2CO_3 + _____ $\text{Cu}(\text{CN})_2$

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Answers

- ① $\underline{1}$ AlBr_3 + $\underline{3}$ K \rightarrow $\underline{3}$ KBr + $\underline{1}$ Al
- ② $\underline{1}$ FeO + $\underline{1}$ PdF_2 \rightarrow $\underline{1}$ FeF_2 + $\underline{1}$ PdO
- ③ $\underline{1}$ P_4 + $\underline{6}$ Br_2 \rightarrow $\underline{4}$ PBr_3
- ④ $\underline{2}$ LiCl + $\underline{1}$ Br_2 \rightarrow $\underline{2}$ LiBr + $\underline{1}$ Cl_2
- ⑤ $\underline{1}$ PbBr_2 + $\underline{2}$ HCl \rightarrow $\underline{2}$ HBr + $\underline{1}$ PbCl_2
- ⑥ $\underline{2}$ CoBr_3 + $\underline{3}$ CaSO_4 \rightarrow $\underline{3}$ CaBr_2 + $\underline{1}$ $\text{Co}_2(\text{SO}_4)_3$
- ⑦ $\underline{2}$ Na_3P + $\underline{3}$ CaF_2 \rightarrow $\underline{6}$ NaF + $\underline{1}$ Ca_3P_2
- ⑧ $\underline{2}$ Mn + $\underline{6}$ HI \rightarrow $\underline{3}$ H_2 + $\underline{2}$ MnI_3
- ⑨ $\underline{1}$ Li_3PO_4 + $\underline{3}$ NaBr \rightarrow $\underline{1}$ Na_3PO_4 + $\underline{3}$ LiBr
- ⑩ $\underline{1}$ CaF_2 + $\underline{1}$ Li_2SO_4 \rightarrow $\underline{1}$ CaSO_4 + $\underline{2}$ LiF
- ⑪ $\underline{2}$ HBr + $\underline{1}$ $\text{Mg}(\text{OH})_2$ \rightarrow $\underline{1}$ MgBr_2 + $\underline{2}$ H_2O
- ⑫ $\underline{2}$ LiNO_3 + $\underline{1}$ CaBr_2 \rightarrow $\underline{1}$ MgBr_2 + $\underline{2}$ H_2O
- ⑬ $\underline{1}$ AgNO_3 + $\underline{1}$ Li \rightarrow $\underline{1}$ LiNO_3 + $\underline{1}$ Ag
- ⑭ $\underline{1}$ $\text{Si}(\text{OH})_4$ + $\underline{4}$ NaBr \rightarrow $\underline{1}$ SiBr_4 + $\underline{4}$ NaOH
- ⑮ $\underline{2}$ NaCN + $\underline{1}$ CuCO_3 \rightarrow $\underline{1}$ Na_2CO_3 + $\underline{1}$ $\text{Cu}(\text{CN})_2$