

Balancing Chemical Equations Worksheet

Which of the following is the correctly balanced equation for the combustion of methane (CH_4)?

- a) $\text{CH}_4 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$
- b) $\text{CH}_4 + 2\text{O}_2 \rightarrow \text{CO}_2 + 2\text{H}_2\text{O}$
- c) $\text{CH}_4 + \text{O}_2 \rightarrow \text{CO}_2 + 2\text{H}_2\text{O}$
- d) $2\text{CH}_4 + 2\text{O}_2 \rightarrow 2\text{CO}_2 + 2\text{H}_2\text{O}$

Which of the following is the correctly balanced equation for the thermal decomposition of calcium carbonate (CaCO_3)?

- a) $\text{CaCO}_3 \rightarrow \text{CaO} + \text{CO}_2$
- b) $\text{CaCO}_3 \rightarrow \text{Ca} + \text{CO}_2 + \text{O}_2$
- c) $2\text{CaCO}_3 \rightarrow 2\text{CaO} + 2\text{CO}_2$
- d) $\text{CaCO}_3 \rightarrow \text{CaO} + \text{C} + \text{O}_2$

Which of the following is the correctly balanced equation for the reaction between iron (Fe) and chlorine gas (Cl_2) to produce iron(III) chloride (FeCl_3)?

- a) $\text{Fe} + \text{Cl}_2 \rightarrow \text{FeCl}_3$
- b) $2\text{Fe} + 3\text{Cl}_2 \rightarrow 2\text{FeCl}_3$
- c) $\text{Fe} + 3\text{Cl}_2 \rightarrow \text{FeCl}_3$
- d) $3\text{Fe} + 3\text{Cl}_2 \rightarrow 3\text{FeCl}_3$