

Science 1.8 AS 90947 Investigate selected chemical reactions

Combination Reactions – Writing Word and Symbol Equations **Answers**

Success Criteria: complete each level before moving onto the next

- Basic: write **word equations** for the following combination reactions
- Proficient: write **symbol equations** for the following combination reactions
- Advanced: **balance the symbol equations** for the following combination reactions

Remember: **Combination reactions occur when two or more reactants combine for form one product**

1. magnesium metal is burnt in oxygen gas.

Word equation **magnesium + oxygen → magnesium oxide**

Symbol equation **$2\text{Mg} + \text{O}_2 \rightarrow 2\text{MgO}$**

2. sulfur is burnt in oxygen gas.

Word equation **sulfur + oxygen → sulfur dioxide**

Symbol equation **$\text{S} + \text{O}_2 \rightarrow \text{SO}_2$**

3. sulfur is heated with iron metal.

Word equation **sulphur + iron → iron sulfide**

Symbol equation **$\text{S} + \text{Fe} \rightarrow \text{FeS}$**

4. zinc metal is burnt in oxygen gas.

Word equation **zinc + oxygen → zinc oxide**

Symbol equation **$2\text{Zn} + \text{O}_2 \rightarrow 2\text{ZnO}$**

5. solid carbon is completely burnt in oxygen gas.

Word equation **carbon + oxygen → carbon dioxide**

Symbol equation **$\text{C} + \text{O}_2 \rightarrow \text{CO}_2$**

6. sodium metal is placed in a container with oxygen gas.

Word equation **sodium + oxygen → sodium oxide**

Symbol equation **$4\text{Na} + \text{O}_2 \rightarrow 2\text{Na}_2\text{O}$**