

Chapter 9. Stoichiometry Review



Write balancing reactions for each reaction.

First write the unbalanced reaction (molecular equation).

1. When are the reactants more likely to react? $\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$ 2. When are products more likely to react? $\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$
3. When are products more likely to react? $\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$ 4. When are reactants more likely to react? $\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$
5. When are reactants more likely to react? $\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$

What does the coefficient in front of the species indicate? The coefficient in front of the species indicates the number of molecules of that species. 7. What does the coefficient in front of the species indicate? $\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$

Write your stoichiometry knowledge for the following chemical reactions.

- How many molecules?
- | | |
|--|--|
| 10 H_2O $\text{C}_2\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ | 10 H_2O $\text{C}_2\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ |
| 10 H_2O $\text{C}_2\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ | 10 H_2O $\text{C}_2\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ |
| 10 H_2O $\text{C}_2\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ | 10 H_2O $\text{C}_2\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ |

- How many molecules of each?
- | | |
|--|--|
| 10 H_2O $\text{C}_2\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ | 10 H_2O $\text{C}_2\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ |
| 10 H_2O $\text{C}_2\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ | 10 H_2O $\text{C}_2\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ |
| 10 H_2O $\text{C}_2\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ | 10 H_2O $\text{C}_2\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ |

Name: _____

What does the coefficient mean?

10. When are the reactants more likely to react? $\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$ 11. When are the products more likely to react? $\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$
12. When are reactants more likely to react? $\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$ 13. When are products more likely to react? $\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$

- How many molecules?
- | | |
|--|--|
| 10 H_2O $\text{C}_2\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ | 10 H_2O $\text{C}_2\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ |
| 10 H_2O $\text{C}_2\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ | 10 H_2O $\text{C}_2\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ |
| 10 H_2O $\text{C}_2\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ | 10 H_2O $\text{C}_2\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ |

- How many molecules of each?
- | | |
|--|--|
| 10 H_2O $\text{C}_2\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ | 10 H_2O $\text{C}_2\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ |
| 10 H_2O $\text{C}_2\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ | 10 H_2O $\text{C}_2\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ |
| 10 H_2O $\text{C}_2\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ | 10 H_2O $\text{C}_2\text{H}_6 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$ |

Name: _____

What does the coefficient of water mean?

14. When are the reactants more likely to react? $\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$
15. When are the products more likely to react? $\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$
16. When are reactants more likely to react? $\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$
17. When are products more likely to react? $\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$