

A First Course on Kinetics and Reaction Engineering

Unit 2 Pre-Class Quiz

- Standard heats of formation and standard heats of combustion are usually tabulated at only one temperature. What temperature is most commonly used for this purpose?
 - 0 K
 - 273 K
 - 298 K
 - 100 °C
 - the normal boiling point
- Which of the following is a standard formation reaction?
 - $\text{CO} + \text{H}_2\text{O} \rightarrow \text{CO}_2 + \text{H}_2$
 - $\text{CO} + 0.5 \text{O}_2 \rightarrow \text{CO}_2$
 - $\text{C} + 0.5 \text{O}_2 \rightarrow \text{CO}$
 - $\text{CO} + 3 \text{H}_2 \rightarrow \text{CH}_4 + \text{H}_2\text{O}$
 - Green Eggs \rightarrow Ham
- Which of the following is a standard combustion reaction?
 - $\text{CO} + \text{H}_2\text{O} \rightarrow \text{CO}_2 + \text{H}_2$
 - $\text{CO} + 0.5 \text{O}_2 \rightarrow \text{CO}_2$
 - $\text{C} + 0.5 \text{O}_2 \rightarrow \text{CO}$
 - $\text{CO} + 3 \text{H}_2 \rightarrow \text{CH}_4 + \text{H}_2\text{O}$
 - Green Eggs \rightarrow Ham
- Which of the following is true of an adiabatic process?
 - the temperature is constant
 - the pressure is constant
 - the viscosity is constant
 - only shaft work is performed
 - no heat is added or removed
- True or false? The adiabatic temperature rise for a reaction can change if the starting composition changes even though the same reaction is taking place in both cases.