

# Temperature & Rate

## Example One

If a reaction has an activation energy of 76 kJ/mol, how many times faster will the reaction proceed at 35.0 °C than 25.0 °C?

## Example Two

At 100.0 °C, it takes 4.00 minutes to react to completion. At 95.0°C the reaction takes 6.00 minutes to react. Using this information determine the activation energy for the reaction.

### **Example Three**

A reaction has an activation energy of 78 KJ/mol. What temperature would be needed to increase the reaction rate by 4 times faster than it occurs at 25°C.

### **Example Four**

A first order reaction has an activation energy of about 21 kJ/mol. The half-life at 25°C is 1.8 minutes. What is the half-life at 45°C