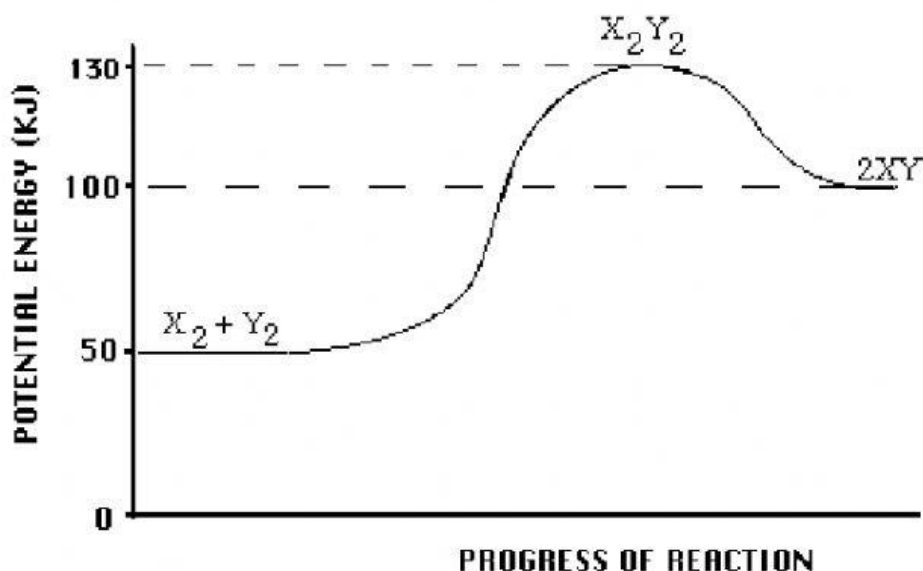


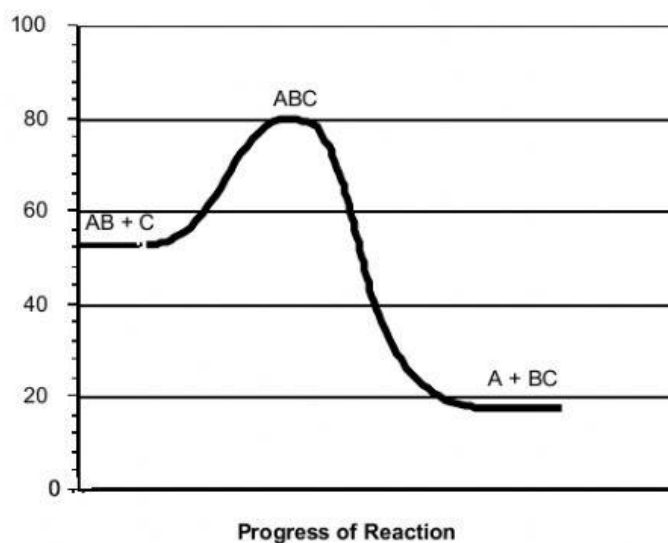
## Worksheet 1-2 - Potential Energy Diagrams

USE THE POTENTIAL ENERGY DIAGRAM TO ANSWER THE QUESTIONS BELOW:



1. Is the overall reaction as shown **exothermic** or **endothermic**?  
\_\_\_\_\_
2. What is the **activation energy** for the forward reaction?  
\_\_\_\_\_
3. What is the **activation energy** for the reverse reaction?  
\_\_\_\_\_
4. What is the **enthalpy change of reaction** ( $\Delta H$ ) for the *forward* reaction?  
\_\_\_\_\_
5. What is the  $\Delta H$  for the *reverse* reaction?  
\_\_\_\_\_
6. Is the *reverse* reaction **exothermic** or **endothermic**?  
\_\_\_\_\_
7. Which species forms the **activated complex**?  
\_\_\_\_\_

Use the following **Potential Energy Diagram** to answer the questions below:



- Determine the **Activation Energy** for the *forward* reaction... \_\_\_\_\_ kJ
- Determine the **Activation Energy** for the *reverse* reaction.... \_\_\_\_\_ kJ
- What is the **Enthalpy Change** ( $\Delta H$ ) for the *forward* reaction?.. \_\_\_\_\_ kJ
- What is the **Enthalpy Change** ( $\Delta H$ ) for the *reverse* reaction?.. \_\_\_\_\_ kJ
- The *forward* reaction is \_\_\_\_\_ thermic.
- The *reverse* reaction is \_\_\_\_\_ thermic.
- Which species or set of species forms the **Activated Complex**? \_\_\_\_\_