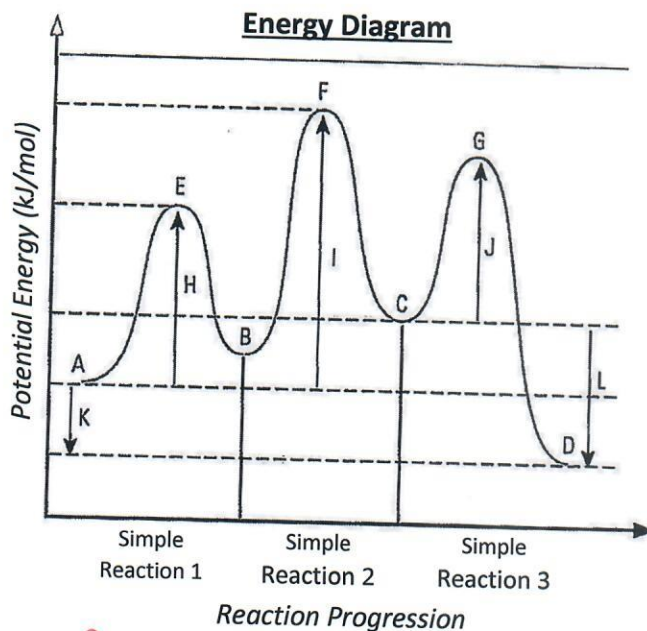


Reaction Mechanisms Practice:

name: SOLUTIONS

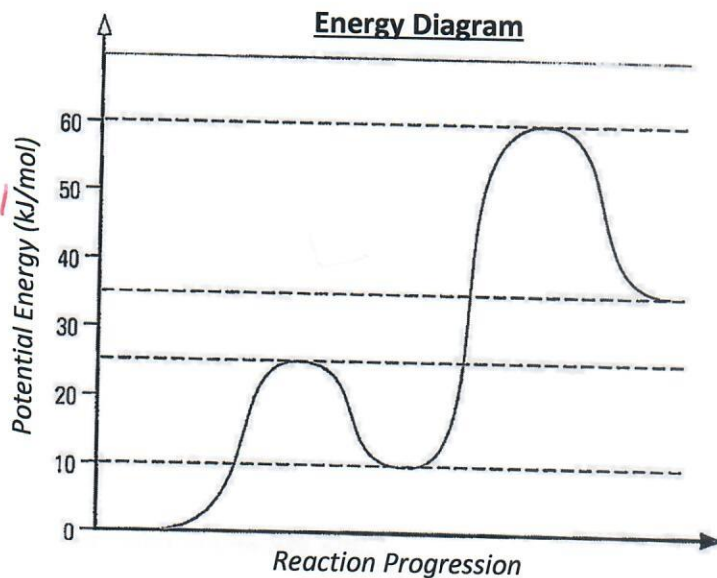
1. Study the following reaction mechanism diagram and answer the questions below:

- The activation complex of simple reaction 3: G
- The intermediate steps of the reaction: B+C
- The final products of the reaction: D
- The activation energy for simple reaction 3: J
- The activation energy for simple reaction 1: H
- The products for simple reaction 2: C
- The reactants for simple reaction 3: C
- Is simple reaction 1 Endo or Exo? Endo
- Is simple reaction 2 Endo or Exo? Endo
- Is simple reaction 3 Endo or Exo? Exo
- How many intermediate steps does the overall reaction have: 2
- Intermediate step with the lowest potential energy: B
- The overall activation energy for the entire reaction: I
- The overall enthalpy of the entire reaction: K
- Is the overall reaction Endo or Exo? Exo



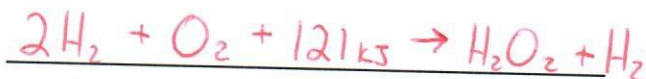
2. Study the following reaction mechanism diagram and answer the questions below:

- How many simple reactions exist: 2
- How many intermediate steps exist: 1
- What is the enthalpy for the reaction: $\Delta H = 35$ kJ/mol
- Is the reaction Endo or Exo: Endo
- What is the activation energy for the 1st simple reaction: 25 kJ/mol
- What is the activation energy for the 2nd simple reaction: 50 kJ/mol
- What is the activation energy for the overall reaction: 60 kJ/mol

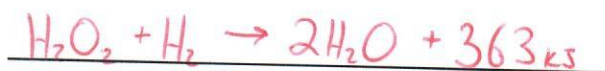


3. Study the following reaction mechanism diagram for the formation of water.

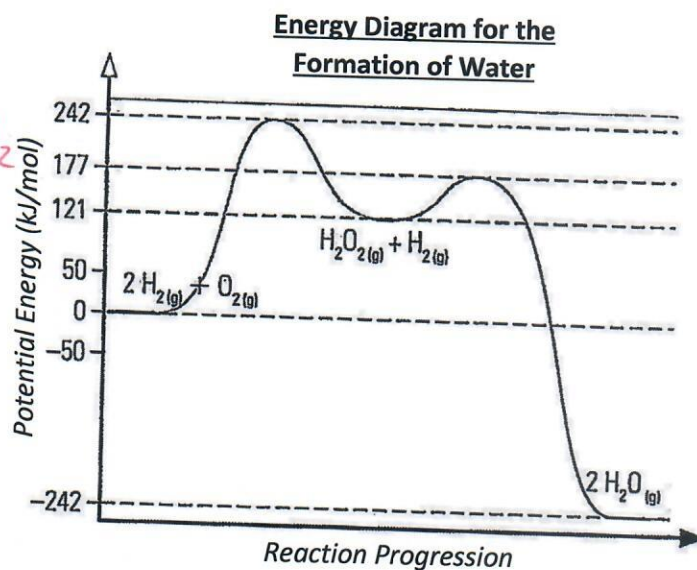
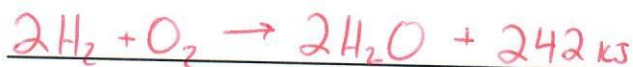
Write the thermochemical equation for the 1st simple reaction:



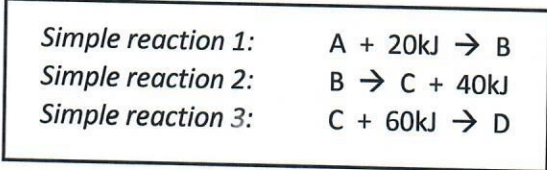
Write the thermochemical equation for the 2nd simple reaction:



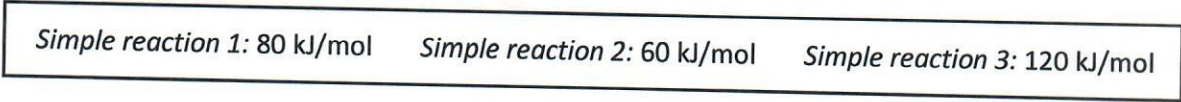
Write the thermochemical equation for the Overall reaction:



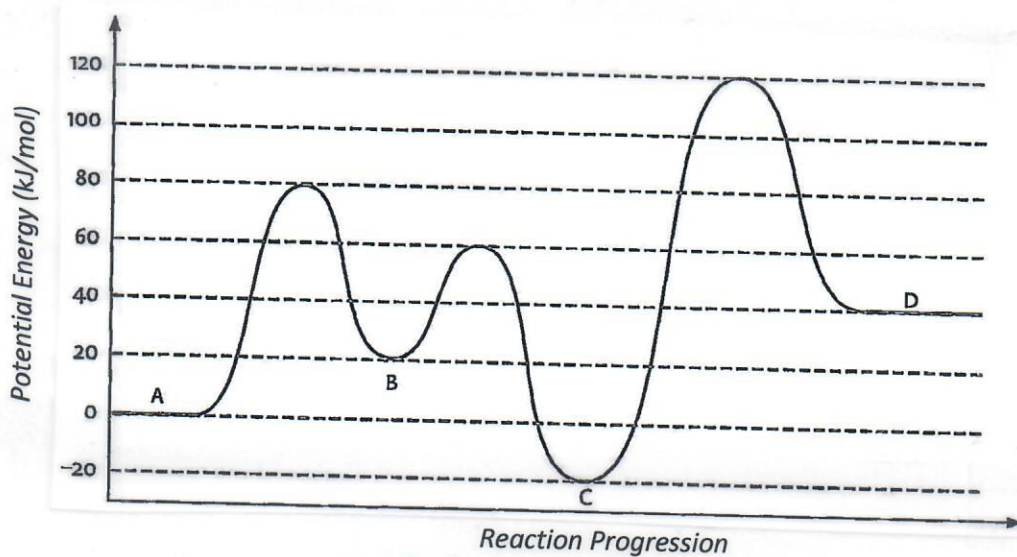
4. The following pertains to the reaction mechanisms involving initial reactants A and final products D



The activated complex for each simple reaction occur at:



In the space provided plot the remaining reaction mechanism from A to D.



- Is the overall reaction Endo or Exo? Endo
- What is the enthalpy of the overall reaction? 40 kJ/mol
- What is the activation energy of the overall reaction? 120 kJ/mol
- Write the thermochemical equation for the overall reaction: $\text{A} + 40\text{kJ} \rightarrow \text{D}$