

Name: \_\_\_\_\_  
Period: \_\_\_\_\_ Date: \_\_\_\_\_

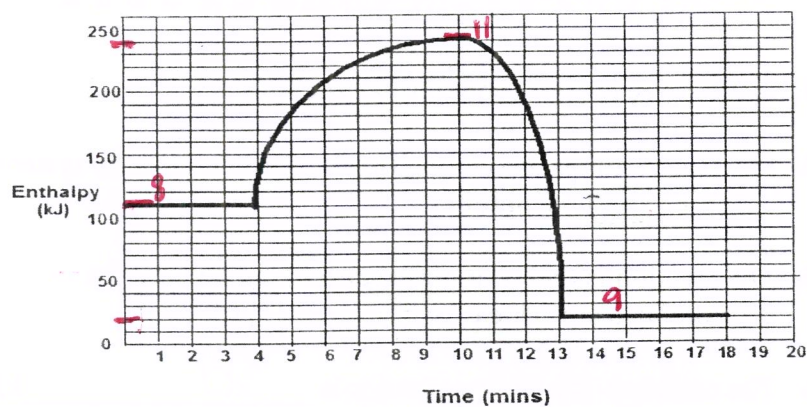
## Activation Energy WS\_K&L

### Define the Following Terms

1. System: \_\_\_\_\_
2. Surroundings: \_\_\_\_\_
3. Standard Conditions: \_\_\_\_\_
4. Enthalpy: \_\_\_\_\_

### Use the Graphs For the Following Questions

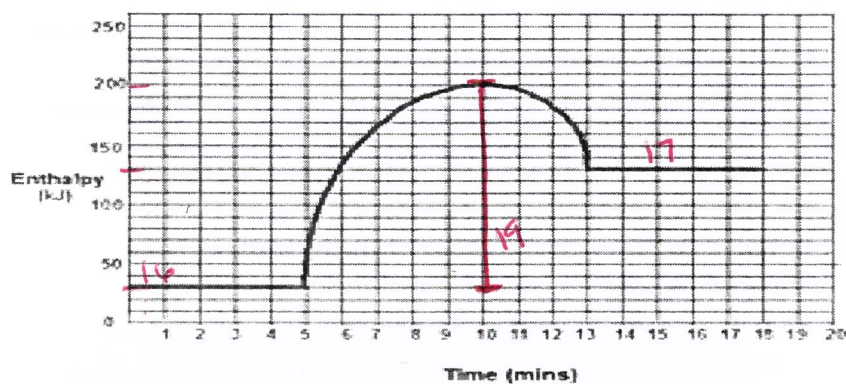
Thermodynamics Graph



5. This is a(n) (~~endothermic~~/exothermic) graph.
6. The surroundings are getting (~~hotter~~/colder) and the system is getting (~~hotter~~/colder).
7. The reaction is (~~releasing~~/absorbing) energy and the surroundings are (~~releasing~~/absorbing) energy.

8. The enthalpy (H) of the reactants is 100 kJ.
9. The enthalpy (H) of the products is 20 kJ.
10. The change in enthalpy ( $\Delta H$ ) of the reaction is -80 kJ.  
 $\text{Products} - \text{Reactants}$
11. The activation energy of the reaction is 140 kJ.  
 $240 - 100$
12. The (products/reactants) have more potential energy.

Thermodynamics Graph



13. This is an (exothermic/endothermic) graph.
14. The surroundings are getting (hotter/colder) and the system is getting (hotter/colder).
15. The reaction is (releasing/absorbing) energy and the surroundings are (releasing/absorbing) energy.
16. The enthalpy (H) of the reactants is 30 kJ.
17. The enthalpy (H) of the products is 130 kJ.
18. The change in enthalpy ( $\Delta H$ ) of the reaction is 100 kJ.  
 $130 - 30$
19. The activation energy of the reaction is 170 kJ.  
 $200 - 30$
20. The (products/reactants) have more potential energy.