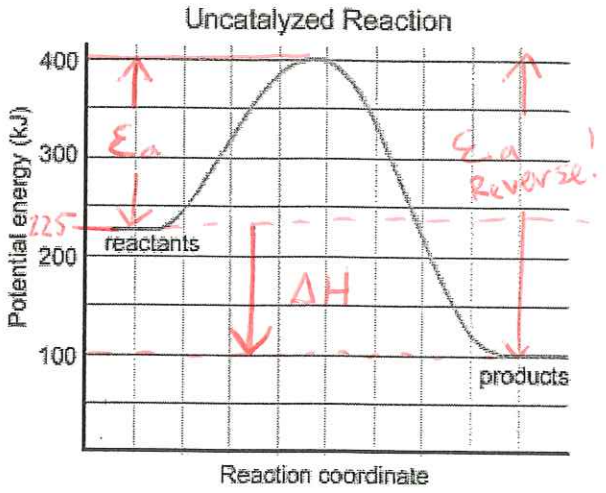
Practice

1. This graph shows the change in potential energy as a reaction takes place. Label the **activation energy** and overall change in energy (**ΔH**) as shown on the example on the previous page.



   a. What is the activation energy of this reaction?

   175kJ

   b. What is the enthalpy change (**ΔH**) of this reaction?

   $\Delta H = 100kJ - 225kJ = -125kJ$
   (final) (initial)

   c. Would this reaction be classified as exothermic or endothermic?

   EXOTHERMIC

   d. If this reaction were to be reversed, what would the activation energy be?

   300kJ

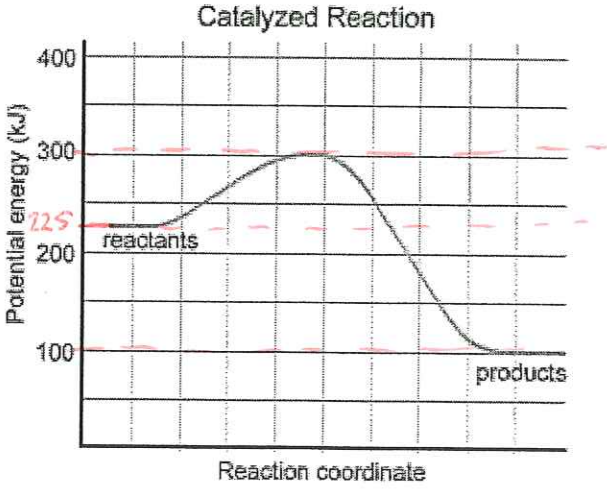
   e. If this reaction were to be reversed, what would the overall change in energy (**ΔH**) be?

   $\Delta H = 225kJ - 100kJ = 125kJ$

   f. If this reaction were to be reversed, would it be endothermic or exothermic?

   ENDOTHERMIC

2. This graph shows the same reaction, but with a catalyst added. Label the **activation energy** and overall change in energy (**ΔH**).



   a. What is the activation energy of this reaction?

   75kJ

   b. What is the enthalpy change (**ΔH**) of this reaction?

   -125kJ

   c. Would this reaction be classified as exothermic or endothermic?

   EXOTHERMIC

   d. Based on this graph, do catalysts make chemical reacts proceed more slowly or quickly?

   MORE QUICKLY