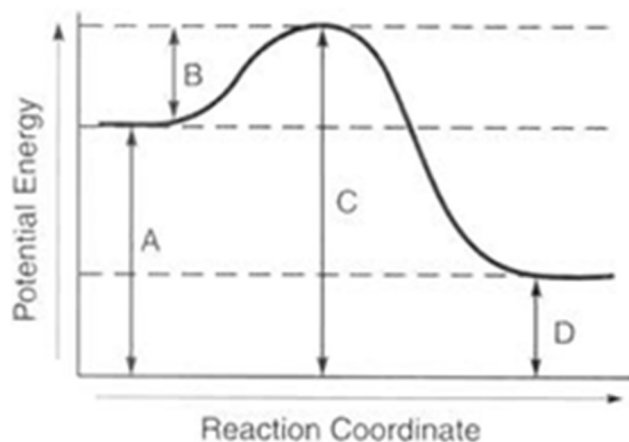


Kinetics HW #1 name _____



Use this potential energy diagram to answer the questions below.

The Y axis has units of kilojoules

The X axis is the "time of reaction", start to end.

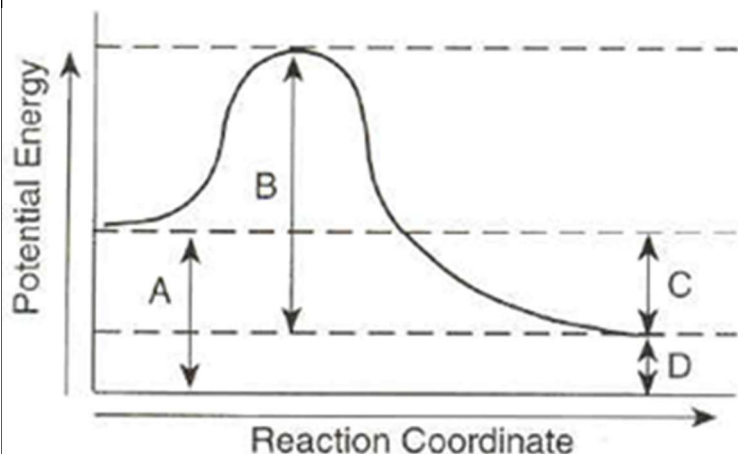
The letters A, B, C, and D all have values, which are -

A = 80 kJ B = unknown
C = 100 kJ D = 20 kJ

What is the potential energy of the reactants?	1	
What is the potential energy of the products?	2	
Is this reaction exo- or endo- thermic?	3	
What is the heat of reaction of this chemical reaction?	4	
Would the energy of reaction be written with the products or the reactants in the balanced thermochemical equation?	5	
Would the ΔH for the reaction change if a catalyst was added?	6	
What is the potential energy in kJ/mol of the activated complex?	7	
What is the activation energy required for this reaction?	8	
Would the activation energy change if a catalyst is added?	9	
Estimate the activation energy if a catalyst is used.	10	



Kinetics HW #2 name _____



This PE Diagram is from an old regents exam.

The letters have these values:
 A = 30 kJ/mol
 B = 50 kJ/mol
 C = 20 kJ/mol
 D = 10 kJ/mol

What is the potential energy of the reactants?	1	
What is the potential energy of the products?	2	
What is the potential energy of the activated complex?	3	
Is the ΔH positive or negative?	4	
What is the heat of reaction for this reaction?	5	
How much energy does it take to start this reaction?	6	
What is this energy in question #6 called?	7	
Is this reaction endothermic or exothermic?	8	
Could sodium chloride dissolving in water be represented by a PE Diagram with this shape (different kJ)	9	

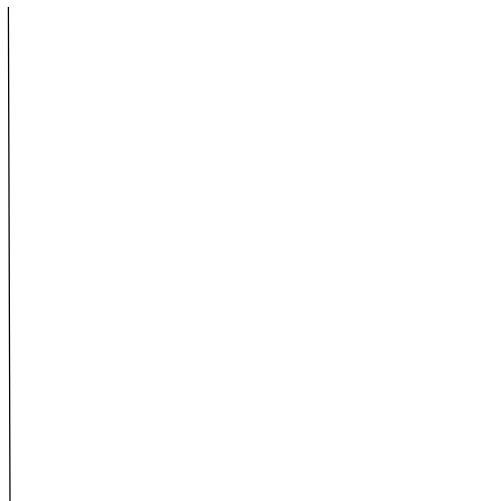
Define
 HEAT of SOLUTION (ΔS)



Kinetics HW #3

both sides name

Draw two complete POTENTIAL ENERGY diagrams for an exothermic and an endothermic reaction. Include titles, axis labels, curves, AE, AC, ΔH , catalyst dotted line, "R" + "P" for reactants and products, and state ENDOTHERMIC OR EXOTHERMIC in each title.

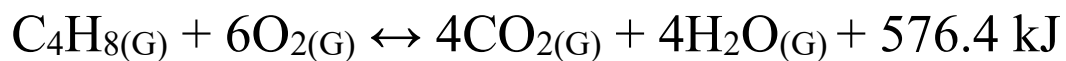


Explain the difference between a catalyst & an inhibitor in a chemical reaction.

State LeChatlier's Principle

Assuming this is in dynamic equilibrium, using arrows, show which direction the stress pushes this (until a new equilibrium is reached). The first one is done for you.

Use a different color for reverse arrows!



Add butane \longrightarrow
Add carbon dioxide

Add heat
Decrease pressure

Add oxygen
Remove carbon dioxide

Remove heat
Remove butane

Increase Pressure
Add a catalyst

Remove oxygen
Add carbon dioxide

Remove water
Add water