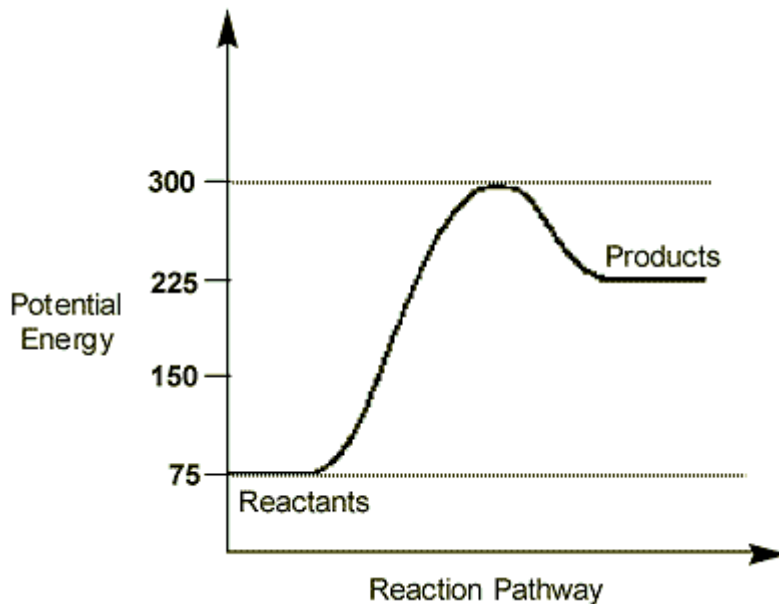


Practice Celebration for Kinetics & Equilibrium Use the diagram at right for questions 1-8.

1. What is the correct unit for the Y axis of this graph? _____
2. What is the ΔH ? _____
3. What is the activation energy of this reaction? _____
4. What is the activation energy with a catalyst? _____
5. What is the potential energy of the reactants? _____
6. Is this an exothermic or endothermic reaction? _____
7. What is the potential energy of the products? _____
8. State a reason for your answer in #7 in a complete sentence starting with:
This reaction is _____ because...



9. Define entropy:

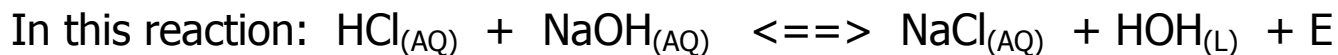
10. Which has the MOST entropy? circle one: $\text{HCl}_{(s)}$ $\text{HCl}_{(aq)}$ $\text{HCl}_{(g)}$ $\text{H}_2\text{O}_{(l)}$

11. Which as the LEAST entropy? circle one: water vapor liquid water ice

12. Put the three phases of matter in this equation in regard to entropy:

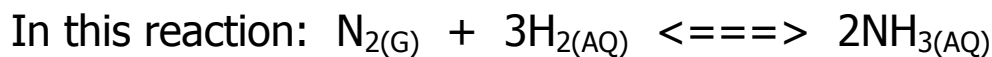
_____ > _____ > _____

13. Skip



14. Is the forward reaction endothermic? _____

15. Is the reverse reaction endothermic? _____



16. Does the forward reaction lead to more or less entropy? _____

17. What is the ΔH of this reaction? _____

18. As the pressure is decreased on this equilibrium, do you get more or less nitrogen? _____

19. As the pressure is increased, do you get more or less hydrogen? _____

20. As the temperature increases, do you get more or less ammonia? _____

21. A reaction you time takes 11.5 seconds exactly to complete. The reaction rate is:

- A. 11.5 seconds B. $1/11.5$ seconds C. $11.5/1$ seconds D. 11.5^{-2} seconds

22. As concentration of reactants is increased, what should happen to the rate of reaction?

23. Explain why: The rate of reaction would increase as the reactant concentration

increases. _____.

24. As the temperature decreases, the rate of reaction will _____ because
