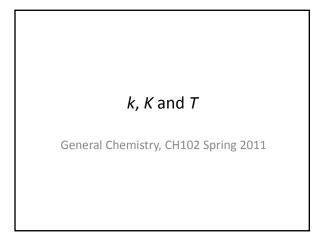
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1. When T is increased, the rate of every chemical reaction must ...

0% 1. increase
0% 2. stay the same
0% 3. decrease
0% 4. More information needed

2. For a particular reaction at 25 °C, the rate law is found to be $k[X][Y]^2$. At 50 °C, the rate must be larger than at 25 °C because of change in ...

0% 1. [X]
0% 2. [Y]
0% 3. k0% 4. [X], [Y] and k

3. The rate constant depends on T as $k = A \exp(-|E_a|/(RT))$ As T approaches 0, the values of k approaches ...

0% 1. 0
0% 2. A
0% 3. $|E_a|/(RT)$ 0% 4. infinity

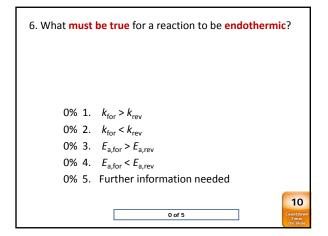
4. The rate constant depends on T as $k = A \exp(-|E_a|/(RT))$ As T approaches infinity, the values of k approaches ...

0% 1. 0
0% 2. A
0% 3. $|E_a|/(RT)$ 0% 4. infinity

5. For an elementary reaction, $K = k_{for}/k_{rev}$. The forward and reverse rate constants, k_{for} and k_{rev} both increase with T. This means as T is increased, K must always ...

0% 1. increase
0% 2. stay the same
0% 3. decrease
0% 4. Further information needed

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7. What **must be true** so that the equilibrium constant $K = k_{\text{for}}/k_{\text{rev}}$ will **increase** with **increasing 7**?

0% 1. $k_{\text{for}} > k_{\text{rev}}$ 0% 2. $k_{\text{for}} < k_{\text{rev}}$ 0% 3. k_{for} increases faster than k_{rev} 0% 4. k_{for} increases more slowly than k_{rev} 0% 5. Further information needed

8. What must be true so that the equilibrium constant $K = k_{\text{for}}/k_{\text{rev}}$ will increase with increasing T?

0% 1. $E_{\text{a,for}} > E_{\text{a,rev}}$ 0% 2. $E_{\text{a,fer}} < E_{\text{a,rev}}$ 0% 3. The reaction is exothermic
0% 4. The reaction is endothermic
0% 5. 1 and 3
0% 6. 2 and 4
0% 7. 1 and 4
0% 8. 2 and 3

9. What must be true so that the equilibrium constant, $K = k_{for}/k_{rev}$ will decrease with increasing T? $0\% 1. \quad k_{for} < k_{rev}$ $0\% 2. \quad E_{a,for} < E_{a,rev}$ $0\% 3. \quad \text{The reaction is exothermic}$ $0\% 4. \quad 1 \text{ and } 2$ $0\% 5. \quad 2 \text{ and } 3$ $0\% 6. \quad 1 \text{ and } 3$ $0\% 7. \quad 1, 2 \text{ and } 3$

10. The forward rate constant $k_{\rm for}=A_{\rm for}\exp(-|E_{\rm a,for}|/(R~T))$ approaches $A_{\rm for}$ at very high T. This means at **very high T** the equilibrium constant K must approach ...

0% 1. infinity
0% 2. $A_{\rm for}/A_{\rm rev}$ 0% 3. $\Delta S/R$ 0% 4. 2 and 3