

What is the rate law for the overall reaction?

- a) $k[Cl_2][H_2]$
- b) $k[Cl_2]^2[H_2]$
- c) $k[CI]^{2}[H_{2}]$
- d) $k[H_2]$
- e) $k[Cl_2][H_2]^2$

Consider the reaction below when selecting an answer that goes with each of the statements below. $N_2(g) + 3H_2(g) \rightleftharpoons 2NH_3(g) = -92 \text{ KJ}$ What happens when the temperature removes after the system has reached equivarium?

- a) The equilibrium constant stays the same, the reaction shifts to the right to reestablish equilibrium.
- b) The equilibrium constant stays the same, the reaction shifts to the left to reestablish equilibrium.
- c) The equilibrium constant stays the same, the reaction does not shift to either the right or left.
- d) The equilibrium constant increases.
- e) The equilibrium constant decreases.

Chapter 12: Part 5 Acid/Base and Solubility Equilibria

frondid f 22 base					
Preview ionized in H ₂ O	Streng	HCl HSO ₄ HNO ₃	Cl ⁻ HSO ₄ ⁻ NO ₃ ⁻	Negligible	
1		$H_{3}O^{+}(aq)$ HSO_{4}^{-} $H_{3}PO_{4}$ HF	$H_{2}O$ SO_{4}^{2-} $H_{2}PO_{4}^{-}$ F^{-}		gth increases
creases	Weak	$HC_{2}H_{3}O_{2}$ $H_{2}CO_{3}$ $H_{2}S$ $H_{2}PO_{4}^{-}$	$C_2H_3O_2^-$ HCO ₃ ⁻ HS ⁻ HPO ₄ ²⁻	Weak	
cid strength in		NH_4^+ HCO_3^- HPO_4^{2-}	NH3 CO3 ²⁻ PO4 ³⁻ OH ⁻		V
Ÿ	Negligible	OH ⁻ H ₂ CH ₄	O ²⁻ H ⁻ CH ₃ ⁻	Strong	$\left. \begin{array}{c} 100\% \\ \text{protonated} \\ \text{in } H_2O \end{array} \right. \right.$