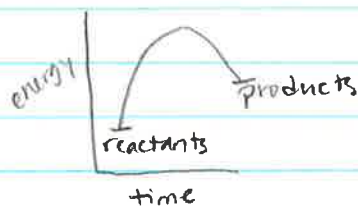
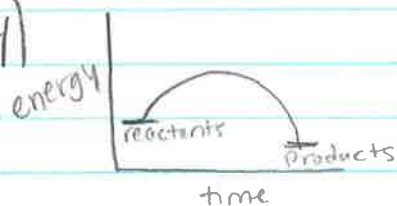


pg 581-583 # 44-47, 51-56, 73-75
pg 625-626 # 61, 82

44)

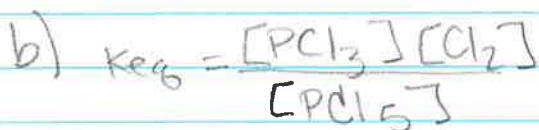
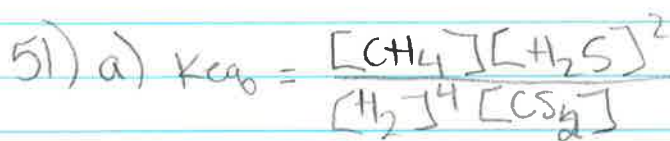


A certain amount of energy is required for a reaction to begin, so it can create a "barrier" that needs to be overcome

45.) Catalysts speed up the rate of reaction by lowering the activation energy

46) a) exothermic rxns can be slowed by increasing the temperature

47) the activation energy has been reached w/ the match, the heat of its own flame provides energy for the rxn



52) a) product favored
b) product favored
c) reactant favored



54) The K_{sp} represents the amount of ions that will form in solution (solubility)

55) Rank most soluble $\rightarrow$ least
 $SrCO_3$, $BaSO_4$, AgI , CuS

56) Adding a common ion will cause the equilibrium of the other aqueous solution will come out of solution and precipitate. (shifts toward solid form)

73) If volume decreases, then pressure increases. When pressure increases, equilibrium will shift toward the side with fewer moles. In this case, it shifts toward the products.

$$74) K_{eq} = \frac{[SO_3]^2}{[SO_2]^2 [O_2]}$$

$$75) K_{eq} = \frac{[CO][H_2O]}{[CO_2][H_2]} = \frac{[0.448][0.448]}{[0.552][0.552]} = 0.658$$

$$61) a) K_a = \frac{[H^+][F^-]}{[HF]}$$

$$b) K_a = \frac{[H^+][HCO_3^-]}{[H_2CO_3]}$$

82) a) adding HCl , reaction shifts toward reactants to counter the addition of acid (makes more base)
b) adding $NaOH$, reaction shifts toward the products to counter the addition of a base