

Ch. 13.4: Collision Theory; Activation Energy & Temperature Dependence of Rate Constants
Homework #13-4: Problems pg. 576 #31, 34, 35, 37, 39, 40, pg. 582 #109

37 $E_a = 1.03 \times 10^5 \text{ J/mol} = 103 \text{ kJ/mol}$

39 $k = 3.0 \times 10^3 \text{ s}^{-1}$

Can you tell from the units of k what the order of the reaction is?

40 $T_2 = 641 \text{ K} = 368^\circ\text{C}$

109 (2) Reaction (a): $\Delta H = -40 \text{ kJ/mol}$

Reaction (b): $\Delta H = 20 \text{ kJ/mol}$

Reaction (c): $\Delta H = -20 \text{ kJ/mol}$