K_c, K_p and temperature.

Pre-lesson assignment, Textbook page 302-304

First watch the video tutorial Position of equilibrium 3

Make notes on the effect of temperature on K_c and K_p

Use the following questions as guidance

1. State the effect on K_c and K_p of raising temperature of
   a. An endothermic reaction
   b. An exothermic reaction
2. Demonstrate using the table on p303 that at higher temperatures the equilibrium
   $2SO_{2(g)} + O_{2(g)} \rightleftharpoons 2SO_{3(g)}$ shifts to the left

3. Demonstrate using the table on p303 that at higher temperatures the equilibrium
   $N_{2(g)} + O_{2(g)} \rightleftharpoons 2NO_{(g)}$ shifts to the right.

Note: You will be wondering why temperature does not obey the same rules as the pressure and concentration. The reason is that you can express equilibrium more accurately as

$K = e^{-\Delta_r G^{\ominus}/RT} = a_c a_d / a_a a_b = \gamma_c \gamma_d / \gamma_a \gamma_b \times [c][d]/[a][b]$

Don't worry about this. Just be happy that there is an explanation waiting for you in year 2 of a chemistry degree.