Name: **Date:**   **Period:**   **Seat #:**
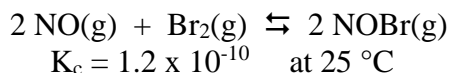
Check off each item if you can do the question. Write down a question to ask if you cannot do the question.
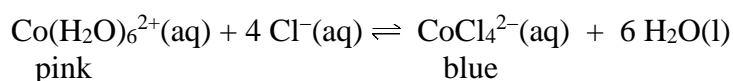
☐ **Reaction Quotient**

$H_2(g) + Br_2(g) \leftrightharpoons 2\ HBr(g)$ $K_c = 5.5 \times 10^3$
   $[H_2]=0.10\ \underline{M}$ $[Br_2]=0.20\ M$ $[HBr]=8.5\ \underline{M}$
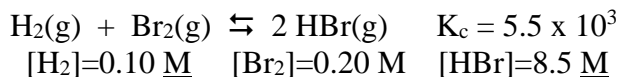
What will happen to the [HBr] as this reaction
approaches equilibrium? (Show your calculation.)

☐ **K_p & K_c**

$2\ NO(g) + Br_2(g) \leftrightharpoons 2\ NOBr(g)$
   $K_c = 1.2 \times 10^{-10}$ at 25 °C

Write the K_p expression for this reaction and
calculate its value. [R = 0.0821 L·atm/mol·K]

☐ **Le Châtelier's' Principle Demo**

$$Co(H_2O)_6{}^{2+}(aq) + 4\ Cl^-(aq) \rightleftharpoons CoCl_4{}^{2-}(aq) + 6\ H_2O(l)$$
         pink   blue

a) add HCl(aq)   ____   ____   ____   ____

b) add H₂O(l)   ____   ____   ____   ____

c) increase the temperature   ____   ____   ____   ____

d) decrease the temperature   ____   ____   ____   ____

e) add AgNO₃(aq)   ____   ____   ____   ____

Note:
     Predict (a) and (b) before the demonstration.
     Watch (c) and determine whether the reaction is endo- or exo-thermic.
     Predict (e) before the demonstration.