CHE 120 W11 Equilibrium Assessment **Name: _____**

1. The exothermic reaction $3A(s) + B(g) \rightleftharpoons 2C(aq) + D(s)$ is at equilibrium.

Fill out the table below with how each quantity changes (I = Increases, D = Decreases, or U = Unchanged)

Event	**How does *K* change?**	**How does moles A present change?**	**Stress? (not graded)**	**Response to stress? (Left, Right, None)**
The pressure is increased by decreasing the volume				
1 mol of C(aq) is added.				
The temperature is decreased.				
Water is added to the solution.				
1 mol of D(s) is added				

b) What is the reaction quotient *Q* for the reaction above?

2. Consider the reaction $N_2(g) + 2O_2(g) \rightleftharpoons 2NO_2(g)$

a) Write the reaction quotient *Q* for the reaction.

b) Evaluate *Q* if 0.20 mol NO_2, 0.080 mol O_2, and 0.040 mol N_2 are initially in a 2.0 L container at 500 K.

c) At 500 K, the concentration equilibrium constant $K_c = 210$. Which direction (right towards products, left towards reactants, or none-reaction already at equilibrium) does the reaction proceed to reach equilibrium?

Check-in: (Answer from 1 = Strongly disagree to 5 = strongly agree)

1. I was challenged intellectually by the content and activities the last weeks. 1 2 3 4 5
2. I had plenty of support from the professor, classmates, and the course tools last week. 1 2 3 4 5
3. I am closer to mastering the ideas of the course now than I was last week. 1 2 3 4 5
4. I made progress in learning last week because of my own efforts and choices. 1 2 3 4 5
5. I felt I was part of a community of learners last week. 1 2 3 4 5

To help your learning in this class, is there anything we should…

1. Continue doing?

2. Start doing?

3. Stop doing?