Preclass Assignment CHEM 1100-General Chemistry II

Name:

Section: 31, TR

Due Date: Thursday 2/27/2020

#11

1. A mixture of 2.66 bar CO, 2.37 bar H_2 , 1.50 bar CH_4 , and 1.75 bar H_2O is allowed to come to equilibrium. K_p is 0.0367 at 1000K. You will use the method of successive approximations to calculate the equilibrium pressures of all the chemical species.

I want you to write the ICE table. Since you have some of everything, you can't determine the reaction direction by simple inspection. Calculate Q and then complete the ICE table. We'll finish the rest of the problem in class.

 $CO(g) + 3H_2(g) \rightleftharpoons CH_4(g) + H_2O(g)$