Name _____ Date _____ Period _____

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RICE Tables

Chemistry

Every entry is in M (change moles to M first). Change row: reactants −, products +, and x terms match the coefficients. E = I + C. Solve for x, then plug the E row into K.

1. $N_2O_4 \rightleftharpoons 2NO_2$. A flask starts with 0.200 M N_2O_4 and no NO_2. At equilibrium $[NO_2] = 0.120$ M. Fill in a RICE table and find K.

2. $H_2 + I_2 \rightleftharpoons 2HI$. A flask starts with 0.300 M H_2 and 0.300 M I_2. At equilibrium [HI] = 0.400 M. Find K.

3. $2SO_3 \rightleftharpoons 2SO_2 + O_2$. 1.00 mol SO_3 is placed in a 2.00 L flask. At equilibrium there is 0.150 mol O_2. Find K.

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4. $CO + H_2O \rightleftharpoons CO_2 + H_2$, K = 4.00. A flask starts with 0.300 M CO and 0.300 M H_2O. Find all equilibrium concentrations. (Hint: take the square root of both sides.)

5. $H_2 + I_2 \rightleftharpoons 2HI$, K = 64.0. A flask starts with 0.500 M H_2 and 0.500 M I_2. Find all equilibrium concentrations.

6. In problem 3, a student puts 1.00 and 0.150 straight into the RICE table. What is wrong?

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