Problem for BICH 411 (5 points).

Answers will be due at the beginning of class October 9.

If your last name begins with A-M, answer # 1.
If your last name begins with N-Z, answer # 2.
Answers must be hand-written.

1. Show how the carbon originally at carbon 2 of pyruvate is distributed in oxaloacetate after two rounds of the citric acid cycle. In your answer, show which carbons of each intermediate of the citric acid cycle would contain that carbon for both rounds. This will require drawing out two rounds of the cycle. If more than one carbon would be labeled, indicate the fractional labeling of each. (Use red or blue ink to indicate the labeling).

2. Show how the carbon originally at carbon 3 of pyruvate is distributed in oxaloacetate after two rounds of the citric acid cycle. In your answer, show which carbons of each intermediate of the citric acid cycle would contain that carbon for both rounds. This will require drawing out two rounds of the cycle. If more than one carbon would be labeled, indicate the fractional labeling of each. (Use red or blue ink to indicate the labeling).