Wilf Csaplar Jr.   Economics 477   Homework #4   Due 9/23

Place your name on the back of this sheet of paper and nowhere else. Staple your answers on the front of this sheet of paper. Failure to follow these directions will cost you 1 point. If you use double-sided printing or print on the back of scrap paper, I will give you one additional point.

1) (35 points) Suppose your current income is $200, and next year's income is $360. How much should you consume each year if the interest rate is 20% and your utility function is $U(C_0, C_1) = C_0^{1/4}C_1^{1/4}$? Show all work.

2) (45 points) Suppose your utility function is $U(H, J, K) = (H*J*K)^{1/4}$, your budget is $36, the price of a hat is $3, the price of a jump rope is $1/hour, and a kick boxing instructions costs $2/lesson. You also have a time constraint of jumping rope costing 1 hour and a kick boxing lesson costs 2 hours per lesson. Set up the two constraints and use a Lagrangian to find the equilibrium.

2) (10 points) Why do we use a Lagrangian for the Von Stackleberg model, but not the Cournot?

3) (5 points) What is the price of this year's consumption in Question #1? Explain your logic.

4) (5 points) Why is the Cournot Model now called the Cournot-Nash Model?