Wilf Csaplar Jr. Economics 280 Homework #4 Due Monday 2/28

Place your name on the back of this sheet of paper and nowhere else. Staple your answers face up on the front of this sheet of paper. Failure to follow these directions will cost you 1 point. Your assignment will be typed, except graphs can be drawn by hand and mathematical equations can be done by hand. Failure to type it will cost you 10 points. If you use double-sided printing or print on the back of scrap paper, I will give you one additional point.

1) (40 points) Suppose your income is $120 per paycheck. The price of zucchini is $12/lb and the price of squash is $10/lb. Draw your budget constraint assuming you only buy zucchini and squash (yuck). Explain how you found the line. Draw a new budget constraint which corresponds to the price of zucchini going up to $15/lb. Explain how you found it. Add to your diagram the indifference curves and a third budget constraint which will help you to find the income and substitution effects. Explain how you knew where to draw the third budget constraint and how you found the income and substitution effects. Given your diagram, are squash and zucchini substitutes or complements? Explain your logic. Given your diagram, are either squash or zucchini inferior? Explain your logic.

2) (40 points) Draw a budget constraint for chairs and doors assuming the price of a chair is twice the price of a door. Explain how you know your graph shows $P_C = 2*P_D$. Illustrate a drop in the price of chairs. Explain why the curve moved as drawn. Draw a third budget constraint which enables you to find the income and substitution effects. Explain how you knew where to draw the third budget constraint and how you found the income and substitution effects. Given your diagram, are chairs and doors substitutes or complements? Explain your logic. Given your diagram, are either chairs or doors inferior? Explain your logic.

3) (10 points) What is the equi-marginal principle for consumption? Why does it make sense?

4) (10 points) What is the formula for the slope of an indifference curve? Prove that formula is correct.