

Slide your assignment under my office door by the time class is scheduled to end, i.e. 4:20.

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 10 points. If you use double-sided printing or print on the back of scrap paper, I will give you one additional point.

Show all work for all questions.

1) (15 points) What part of my webpage <http://www.WCsaplarJr.info> do you think is most helpful? Explain your logic. Is anything missing which would be helpful? If you were a Managerial Economics major, then which courses would you be taking *comps* in on Tuesday Morning? According to the boxes in yellow on my main page, which of the 25 most requested skills on LinkedIn are taught to our Economics majors?

For these questions, ignore the fact that these are not valid utility functions.

2) (20 points) Suppose your utility function for apples and bananas is given by $U(A,B) = 4A^2B^2$, the price of an apple is \$2/apple, the price of a banana is \$4/banana, and you have \$200 to spend on fruit. How many of each fruit will you buy to maximize your utility? How much is your utility at that consumption point? How much is λ ?

3) (20 points) Suppose your utility function for CDs and digital downloads is given by $U(C,D) = 4A^4B$, the price of a CD is \$12/CD, the price of a digital download is \$1/download, and you have \$150 to spend on music. How many of each type of music will you buy to maximize your utility? How much is your utility at that consumption point? Without redoing the calculations, approximately how much more utility would you get if you could spend \$15 more? How did you reach that conclusion?

4) (20 points) Suppose your utility function for eggs and figs is given by $U(E,F) = 4E^2F^4$, the price of an egg is \$2/egg, the price of a fig is \$4/fig, and you have \$80 to spend on food. How many of each type of food will you buy to maximize your utility? How much is your utility at that consumption point? Without redoing the calculations, approximately how much more utility would you get if you could spend \$12 more? How did you reach that conclusion?

5) (25 points) Suppose your utility function for grapes and hats is given by $U(G,H) = 4G^{1/2}H^{1/4}$, the price of a bunch of grapes is \$2/bunch, the price of a hat is \$8/hat, and you have \$240 to spend on these two items. How many of each item will you buy to maximize your utility? How much is your utility at that consumption point? Without redoing the calculations, approximately how much more utility would you get if you could spend \$8 more? How did you reach that conclusion?