BPUB 250 Joel Waldfogel
Managerial Economics Spring 2002

Due at the start of class Wed, Jan. 23rd

1.
   a. Briefly explain the difference between positive and normative economic analysis.
   b. Briefly describe the difference between economic theory and empirical economics.

2. What does a supply curve represent? A demand curve?

3. Consider the following functions:

   a. $Z=f(x,y)=x^2y^3+10x$
   b. $Z=f(x,y)=(x^2+y^2)^{0.5}$.

Calculate the partial derivatives of these functions with respect to x and y.

4. You wish to enclose as much land as possible with a rectangular fence. Zoning regulations require that north-south fences must be cedar ($10 per foot) while east-west portions must be redwood ($20 per foor). You have $1000 and an unlimited open field. Find the maximum area you can enclose using the Lagrangean method. Can you do this problem with univariate calculus? How do you know you have found a maximum?

5.
   a. Define an indifference curve, verbally and mathematically.
   b. Consider the utility function $u=x^{0.5} + y^{0.5}$. Graph the associated indifference curves for a few values of u (u=2, u=4). Derive an expression for the MRS. Explain intuitively how it varies along the indifference curve.

6. Represent in indifference curve diagrams a typical consumer's attitudes toward:
   a. two goods, say oranges and apples,
   b. a good and a bad, say apples and brussel sprouts,
   c. two bads, say haggis (minced offal of sheep boiled in maw with oatmeal) and drisheen (an Irish blood pudding).