

Intermediate Microeconomics
Fall 2002
Assignment 3

Due Date: Monday, September 30

Be sure to show all of your work and clearly indicate your final response to each question. For exercises from the workbook you can hand in the completed workbook pages or provide the answers on separate sheets of paper. Please be sure that your homework is stapled before handing it in.

1. WIM (Workouts in Intermediate Microeconomics) 5.6
2. WIM 5.10
3. WIM 5.11
4. An individual has a utility function given by

$$u = \ln(x_1) + x_2.$$

First graph the indifference curves that pass through the points $(x_1 = 1, x_2 = 1)$ and $(x_1 = 3, x_2 = 2)$ to get an idea of the qualitative features of the indifference map (collection of indifference curves). Let the individual have an income level of $I = 1$. Determine her optimal consumption levels of x_1 and x_2 given the two following sets of prices:

- (a) $p_1 = .5, p_2 = 1$
 - (b) $p_1 = .5, p_2 = 5$
 - (c) Write down the generic demand functions associated with this utility function, *i.e.*, $x_1^*(p_1, p_2, I)$ and $x_2^*(p_1, p_2, I)$.
 - (d) Given your demand functions, are x_1 and x_2 normal goods? Qualify your answer as appropriate.
5. WIM 6.1
 6. WIM 6.7
 7. WIM 6.9