

**Econ 361: Intermediate Microeconomic Analysis**  
**Prof. Sarah West**  
**Spring 2012**

**Homework 1**  
**30 points**

1. (6 points) Use the tables found at the Occupational Employment Statistics archived data pages ([http://www.bls.gov/oes/oes\\_arch.htm](http://www.bls.gov/oes/oes_arch.htm)) and at the CPI page (<http://www.bls.gov/cpi/#data>) at the Bureau of Labor Statistics to answer the following questions. You should use the mean wage for all national occupations and the CPI for all urban consumers (current series).
  - a. What is the percentage change in the nominal average wage (average of all national occupations) in the U.S. between 1999 and 2010?
  - b. What is the percentage change in the real average wage (average of all national occupations) in the U.S. between 1998 and 2010?
  - c. What can you say about the change in workers' purchasing power between 1999 and 2010?
2. (6 points) Is demand for a good likely to be more or less elastic in the long run? Explain, making sure you use examples where relevant.
3. (6 points) Canada is considering increasing the price of alcohol in order to reduce alcohol consumption (this is true—they are considering establishing a minimum price). You have been hired to determine the likely effect of the new policy on the market for alcohol.
  - a. From published peer reviewed articles and from reputable websites, gather and write down the empirical estimates and other data required to predict the effect of an increase in price on the alcohol market. It may be helpful to read part (b) below first.
  - b. Use these estimates to derive the main equations in your model of the alcohol market. Provide example equations and link them explicitly to the estimates.
  - c. List and explain three potential problems with your model. What should policymakers take care to consider when employing your model?
4. (4 points) A market has a demand curve is given by  $P = 200 - Q$  and a supply curve given by  $P = 0.5Q$ . Is demand elastic or inelastic with respect to price? How about supply? Explain.
5. (4 points) Write down a utility function that represents the same preferences as  $U = x^{1/2}y^{1/2}$ , and explain why you chose the function you did (you should explain what in general characterizes a set of functions that represent the same preferences).

6. (4 points) Suppose that Sheila's marginal utility of consuming one more pack of M&Ms equals 5 utils, and her marginal utility of consuming one more Snickers bar also equals 5 utils. Is she maximizing utility? Explain.