

**Econ 361: Intermediate Microeconomics**  
**Prof. Sarah West**

**Homework 2**  
**30 points**  
**Spring 2012**

1. (4 points) If for a consumer  $\frac{MU_x}{MU_y} > \frac{p_x}{p_y}$ , can she increase utility by buying more of good  $x$  and less of good  $y$ ? Explain.
  
2. (4 points) Draw a set of indifference curves associated with each statement. Treat each subquestion as an entirely different question. Jack consumes only two goods: cheese and crackers.
  - a. If Jack eats more cheese but gets no more crackers, his utility does not change.
  - b. Jack is willing to give up 2 ounces of cheese in exchange for 5 crackers.
  - c. Jack dislikes cheese and likes crackers. If you give him cheese, he will throw it away.
  - d. Jack dislikes cheese and likes crackers. If you give him cheese, he will eat it to be polite.
  
3. (4 points) Is a good its own complement or its own substitute? Explain.
  
4. (6 points) Because it is often costly for young children in developing countries to go to school (because the opportunity costs of doing so are high, transportation is difficult, or fees are charged by schools), a commonly suggested development strategy is to subsidize children's consumption of education by instituting policies that reduce its price. You are asked to evaluate this idea, taking into account the possible effects of the subsidy on education and on food consumption.
  - a. Under what conditions would the reduction in the price of education increase the amount of education "consumed" by a child? Use a graph with indifference curves and budget constraints as part of your answer and explain in words.
  - b. Under what conditions would the reduction in the price of education *decrease* the amount of education "consumed" by a child? Use a graph with indifference curves and budget constraints as part of your answer. Are these conditions likely to hold? Explain.
  - c. What would we expect to happen to a child's food consumption in the present period as a result of the subsidy to education?

5. (6 points) Josh likes Sprites ( $s$ ) and enchiladas ( $e$ ) (He likes enchiladas verdes the best). A Sprite costs him \$1.50, and an enchilada costs him \$2.50. His income is \$600.00.

a. If Josh's utility is given by  $U = s + 3e$ , how many Sprites and how many enchiladas will he consume?

b. If Josh's utility is instead given by  $U = \min(s, 3e)$ , how many Sprites and how many enchiladas will he consume?

c. Finally, if Josh's utility is instead given by  $U = s^{1/3}e^{2/3}$ , how many Sprites and how many enchiladas will he consume?

6. (6 points) The Obama administration claims that moving to a price index calculated with more frequently-adjusted quantities will save the federal government money without making anyone worse off than they are now. Interpret, and use a graph as part of your interpretation.