ECO 401-001
Spring 2005
Problem Set #3

Due: Tuesday, February 22, 2005

1. Paoli consumes two goods, wine and cheese. His monthly income is 200€ and the price of cheese is 5€ per wedge. When the price of a bottle of wine is 10€ he consumes 10 bottles per month. When the price of wine falls to 5€, he increases his consumption to 15 bottles per month.
    a) Illustrate Paoli's price-consumption curve for wine.
    b) Is his demand for wine elastic or inelastic? Explain using your answer to part (a).

2. Illustrate the income and substitution effects of a price increase for an inferior good.

3. Mick has $100 of income per week available for recreational activities, including exercise, movies, restaurant meals, etc. Mick's health club charges a fee of $4 per hour, and Mick chooses to use the facility for 10 hours per week.
    a) Illustrate Mick's consumption choice in a diagram with health club usage on the horizontal axis and other recreational activities on the vertical axis.
    b) Now Mick's health club institutes a new pricing policy. A fixed fee of $30 per week is charged for access to the facilities, but then a rate of $1 per hour is charged for each hour of utilization. Is Mick better off as a result of this change? Explain your answer using the diagram that you drew in (a).

4. You consume health care and a composite good that we will call AOG. Your monthly income is $100. The price of AOG is $1 per unit. The price of health care is $4 per unit.
    a) Under these conditions you choose to consume 8 units of health care per month. Illustrate in a diagram with your budget constraint and indifference curve.
    b) Since you are a poor college student, you qualify for a new government program. Your consumption of health care will be subsidized so that its price falls to $2 per unit. Under these conditions you increase your consumption of health care to 15 units. Illustrate.
    c) Sketch your demand curve for health care. How much does your consumer's surplus increase when the price you pay for health care falls from $4 to $2? Show this in your demand curve diagram.
    d) How much does it cost taxpayers to provide this subsidy to you? Would you prefer to have that much cash, or keep the subsidy instead? Use your diagram to explain why.