ECO 401-001
Spring 2005
Problem Set #1

Due: Tuesday, February 8

1. From the *Lexington Herald-Leader*, October 2, 1994: "Currently spot market prices for coal are around $30 per ton. In April 1993 the price was about $20 per ton. Several factors were suggested as being responsible for this price increase: the nine-month United Mine Workers strike last year, flooding on the Missippi River last summer, and a harshly cold winter followed by a very hot summer in many regions."
   (a) In separate diagrams, use supply and demand analysis to explain why each of the three above explanations would lead to an increase in the price of coal.
   (b) Total coal production in the United States was 943.8 million short tons in 1993. The projected total output for 1994 was 1023 million short tons. Now let's analyze the market for labor services of people who transport coal, such as truck drivers, train engineers, etc. What would you expect to happen to the level of employment and wage rates in such occupations if the 1994 coal market conditions were to persist?

2. Suppose the Lexington city council decides to adopt a "living wage" policy, whereby all municipal employees are paid a minimum of $11.50 per hour. Discuss the effect of such an ordinance on various types of labor, such as summer lifeguards at city pools and school teachers. Can you think of a reason why municipal workers' unions might also want the city government to require firms that contract with the city also be subjected to the living wage ordinance?

3. The world pepper crop increased by six percent between 1998 and 1999. Market experts predicted that pepper prices would drop from $2 per pound to $1.10. Calculate own-price elasticity of demand for pepper and then, recalling the factors that influence elasticity of demand, explain why the number you calculated makes sense.

4. Food consumption studies of U.S. households have turned up the following evidence. Households with annual incomes of $15,000 consume on average 30 pounds of hot dogs per year, while households with annual incomes of $20,000 consume on average 26 pounds of hot dogs per year. Calculate the income elasticity of demand for hot dogs and tell what kind of good they are.