PROBLEM SET #6: Individual Demand - The Indifference Curve Interpretation

1. Slobodon spends all his income on meat or on potatoes. Draw his budget constraint in each of the following cases.

   a. His income is $100. Meat costs $2 per pound, potatoes cost $1 per pound.
   b. His income is $100. Meat costs $4 per pound, potatoes cost $1 per pound.
   c. His income is $200. Meat costs $4 per pound, potatoes cost $1 per pound.
   d. His income is $200. Meat costs $8 per pound, potatoes cost $2 per pound.

2. Use indifference curves to illustrate your preferences between the following goods.

   a. Left and right shoes. What do we call such goods?
   b. Quarters and nickels. What do we call such goods?

3. Suppose that the Borgia family has $100 to spend on food per day. Suppose also that they always use 1 lb. of salt per 999 lbs of food they consume.

   a. What kind of goods are salt and food for the Borgias.
   b. If the price of food is $p_f$ and the price of salt $p_s$ show the budget constraint for the Borgias.
   c. Suppose that initially a lb. of salt costs $1, and a lb. of food $1. How many pounds of salt and how many pounds of food are consumed? (Hint: $Q_f = 999Q_s$).
   d. Suppose the price of salt falls to $0.50 per pound. What is the new budget constraint? How much food and how much salt are consumed?
   e. What is the price elasticity of demand for salt?
   f. Suppose instead the price of food falls to $0.50 per lb. and the price of salt is still $1. What is the consumption of food and salt now?
   g. What is the price elasticity of demand for food? Why is the answer here so different?