Microeconomics: Problems

1. Suppose that I want a model that will predict the price and quantity of the following two goods: milk and Nuclear Missiles. Do the assumptions made in class (when deriving our model of supply and demand) fit the former good better, or the latter?

2. Now consider the market for milk. Suppose that consumers always, regardless of the quantity consumed, obtain a marginal utility of $5 for a unit of milk. What does the demand curve look like?

3. Now assume that firms face an increasing marginal cost of producing milk. What does this imply about the supply curve for milk?

4. Now suppose that cows become cheaper so that it is cheaper to produce milk. What happens to the equilibrium quantity and price of milk?

5. Now suppose that the quantity of cookies, a compliment to milk, increases. What happens to the equilibrium quantity and price of milk?

6. Now suppose that, instead of a constant marginal utility of $5 per unit of milk, consumers always demand 10 units of milk, regardless of the price. How do your answers to #4-#5 change?

Consider the market for insulin, an important drug for treating diabetes:

Table 1: Market for Insulin

Units	Total Utility	Total Cost
1	$1000	$100
2	$1950	$150
3	$2850	$250
4	$3700	$400
5	$4400	$600
6	$5100	$850
7	$5700	$1150
8	$6300	$1500
9	$6800	$1900
10	$7300	$2400

7. Derive the demand curve. Explain why it is downward sloping.

8. Derive the supply curve. Explain why it is downward sloping.

9. Solve for the equilibrium price and quantity.

10. Suppose that the cost of producing insulin doubles. What happens to the price and quantity?

11. Are firms able to pass most of these higher costs on to consumers? Explain why they can or can not.

12. List five things that provide you with utility.

13. Can you think of a good or service that provides you increasing marginal utility instead of decreasing marginal utility?