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?

7. Why is milk called an "elastic good" under the assumptions of #2 and an "inelastic good" under those of #6?

8. Suppose that the production of milk is found to release a toxic chemical into the air that causes cancer. Describe the nature of this market failure and how policy might potentially make the market more efficient?

9. Now instead assume that the consumption of milk is found to reduce the risk of cancer in the person who drinks it. Is this a market failure?

10. In class, we discuss the public goods problem using the example of national defense. Why isn't the market for milk subject to this problem?

11. True or False? A free market, without any taxation or regulation, always results in Pareto efficiency?

Units	Total Cost	Total Utility
1	$10	$1000
2	$30	$1800
3	$50	$2300
4	$80	$2600
5	$110	$2800
6	$170	$2900
7	$240	$2970
8	$340	$3000
9	$500	$3020
10	$1000	$3030

12. Suppose that the following table describes the *total* utilty and cost associated with consuming and producing televisions:

Describe the demand curve, supply curve, and equilibrium levels of price and quantity in the market for TVs?

14. Speaking of TV, isn't it past time for Interstellar II?

15. Suppose that the price of electricity increases. How might that affect the market from #13.

16. Do you think Copper ever made it back to Edmund's Planet?