

Elasticities and Costs: Problems

Consider the demand for cats:

Table 1: Market for Insulin

Cats	Marginal Utility	Marginal Cost
1	\$100	\$1
2	\$70	\$3
3	\$50	\$7
4	\$30	\$12
5	\$20	\$20
6	\$10	\$30
7	\$1	\$100
8	-\$20	\$1000
9	-\$6800	\$1,000,000
10	-\$1,000,000	\$1,000,000,000

1. (Review). Solve for the equilibrium quantity and price of cats.
2. (Review). Suppose that people figure out that cats are assholes and that they obtain less utility from owning these horrible creatures as a result. How will this affect the equilibrium quantity and price?
3. (Bonus) Does anyone want a decrepit 18 year old cat that wakes its owner up every morning at 6 AM? Let me know.
4. A “satiation point” is where total utility peaks and any additional consumption of the good or service reduces total utility. Does such a satiation point exist in this market?
5. Suppose that the price of cats rises from \$10 to \$20. Calculate the price elasticity of demand? Why is it negative?
6. Suppose that the price of cats rises from \$50 to \$70. Calculate the price elasticity of demand? Is it the same as from #5?
7. Suppose that average household income increases by 5%. The demand for cats then is cut in half. Calculate the income elasticity of demand.
8. Are cats an inferior or normal good? This is independent of them clearly being an annoying good.

9. Suppose that the price of litter boxes rises. Because litter boxes and cats are compliments, what will happen the the equilibrium price and quantity of cats?
10. Suppose that when the price of cats rises from \$3 to \$5, firms double their supply. What is the price elasticity of supply?
11. Suppose that cat producers have fixed costs equal to \$50. Calculate the average cost curve for cats.
12. What inputs of production tend to be fixed in the short-run? Which tend to be flexible?
13. Why is long-run average cost less than or equal to short-run average cost for given costs of labor and capital?
14. What is the difference between a firm's revenue and its profits?
15. When your driving a Lincoln, stress seems to melt away. But where does it go?
16. Suppose that a policy maker wants to tax a good in order to discourage its consumption. Will this policy be more or less effective if the good is highly (demand) inelastic?
17. Can you think of a scenario where, for low quantities, a good is very elastic, but then is very inelastic for high quantities?
18. True or False? Luxury goods are a type of inferior good.