

Introduction To Quantitative Economics: Problem Set 1

October 19, 2015

Question 1

Suppose that there were 25 individuals who had a reservation price of 500 and that the 26th person had a reservation price of 200.

a) What would the demand curve look like (Recollect that the reservation price of a good is the highest price that a given individual will accept and still purchase the good. In other words, the reservation price is the price at which an individual is just indifferent between purchasing or not purchasing the good.)

b) In the above example, what would the equilibrium price be if there were 24 apartments to rent? What if there were 26 apartments to rent? What if there were 25 apartments to rent?

Question 2

Suppose that we have 8 people who want to rent an apartment. Their reservation prices are given below.

Person =	A	B	C	D	E	F	G	H
Price =	40	25	30	35	10	18	15	5

a) Plot the market demand curve.

b) Suppose the supply of apartments is fixed at 5 units. In this case there is whole range of prices that will be equilibrium prices. What is the highest price that would make the demand for apartments equal to 5 units?

c) What is the lowest price that would make the market demand equal to 5 units?

d) With a supply of 4 apartments, which of the people A to H end up getting apartments?

e) What if the supply of apartments increases to 6 units. What is the range of equilibrium prices?

Question 3

Suppose demand for seats at football games is $P = 1900 - (1/50)Q$ and supply is fixed at $Q = 90000$ seats.

a) Find the equilibrium price and quantity (using algebra and a graph).

b) Suppose that the government prohibits tickets scalping (selling tickets above their face value), and the face value of tickets is 50 (this policy places a price ceiling at 50). How many consumers will be dissatisfied (how large is excess demand).

c) Suppose that the next game is a major rivalry, and so demand jumps to $P = 2100 - (1/50)Q$. How many consumers will be dissatisfied for the big game.

Question 4

Suppose the demand curve is $D(p) = 100 - 2p$, where p is the price and D is the demand. What price would the monopolist set if he had 60 apartments? How many would he rent? What price would he set if he had 40 apartments? How many would he rent?