Microeconomics Group45 吴熙楠

Homework01

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1 Problem 1

(a)This information will affect my decision to go to the concert. Because I like flank steak and I can eat in her party at no charge. So going to the concert is the opportunity cost if I think the value of eating the flank steak is greater than the value of going to the concert. The opportunity cost of going to the concert becomes larger than before, but the opportunity cost of going to the party has nnot changed. So it will affect my decision.

(b)This information will not affect my decision to go to the concert. Although I know that the price of the ticket is $10 and the ticket is non-refundable. And it is the sunk cost, so it should not affect my decision after I buy it. Going to the concert is the opportunity cost if I go to the party, but I politely deciline because I really want to go to the concert. The opportunity cost has not changed, so I don't change my decision.

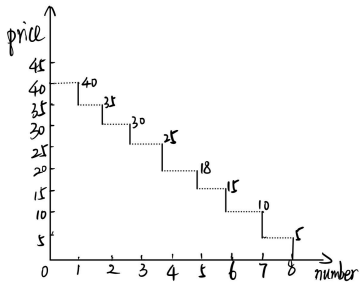
2 Problem 2

(a)As shown in the table above, 0 hour of study time corresponds to 0 point, 1 hour corresponds to 10 points, 2 hours correspond to 13 points, 3 hours correspond to 12 points, 4 hours correspond to 5 points. So we can see that 2 hours of study time will make me get a maximum of 13 points. That is to say, if I study in an optimal way, I can earn 13 points.

(b)We know that when our marginal benefits are larger than our marginal cost, our total points will increase. So If we need to find the optimal number of hours for which we should study, we can compare marginal benefits with marginal cost. Actually the total points are largest when the marginal benefits are equal to the marginal cost, but because the data points are discrete, we cannot achieve strict equality. Then we find that when the study time is 2 hours, the marginal benefits are larger than the marginal cost, but when the study time is 3 hours, the marginal benefits are smaller than the marginal cost. So 2 is the optimal number of hours for which we should study.

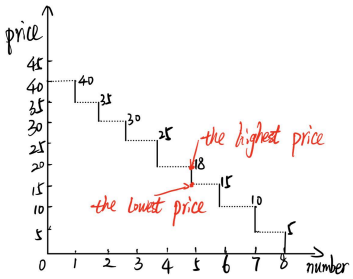
3 Problem 3

(a)



The Market Demand Curve

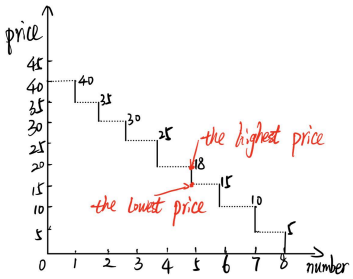
(b)



The Market Demand Curve

According to the figure above, the highest price that would make the demand of apartments equal to 5 units is 18.

(c)



The Market Demand Curve

According to the figure above, the highest price that would make the demand of apartments equal to 5 units is 15.

(d)Because the supply of four apartments is less than the demand, the person with higher reservation price will get the apartment. In this case, A,C,D,G will get the apartments.

(e)If the supply of apartments increases to 6 units, the range of equilibrium prices will go down because of the rising supply. The range of equilibrium prices will be $10 \sim 15$.

4 Problem 4

(a)

Price Revenue Statement

Number	1	2	3	4	5	6	7	8
Price	40	35	30	25	18	15	10	5
Revenue	40	70	90	100	90	90	70	40

(b)From the table above, renting out four apartments yields the most. So in this case, A,C,D,G will get the apartments.

(c)In this case, the top 5 prices are 40,35,30,25,18. So he can earn 148 if he rents all 5 apartments.

(d)In the same way, A,C,D,G,E will get the 5 apartments.

(e)In the case of (d), the landlord can earn more and there are also more apartments available to rent to others. So the outcome in (d) is Pareto efficient, and the market outcome is Pareto inefficient.

5 Problem 5

(a)1.If we assume that the tax rate is τ and the previous reservation price is a. Then his reservation price will become $a(1-\tau)$. So in this case, if there are 5 apartments to be rented, the maximum equilibrium price is $18(1-\tau)$. 2.If we assume that the tax is r and the previous reservation price is a. Then his reservation price will become $a-r$ (of course $r \leq a$). So in this case, if there are 5 apartments to be rented, the maximum equilibrium price is $18-r$.

(b)Whether we use the tax rate or the tax to calculate, the result is allways the same compare to what happens if the tax is imposed on the landlord. The landlord's profit is allways $a(1-\tau)$ or $a-r$, and the renters allways cost a for renting the apartments.