

HOMEWORK #2 (PART 2 OF 2)
Due Oct 7 IN CLASS

NO LATE SUBMISSION IS ACCEPTED
 Please TYPE and STAPLE your work
 Graphs and formulas can be drawn by hand
The number of points here sums up to 12.5

QUESTION 2.6 (12.5 pts)

Consider the firm, which produces bicycles. Complete the following table assuming that the price of one bicycle is fixed at $P_{out} = \$25$ and that the firm can sell as many bicycles as it wants at this price. TP means Total Profit

Q_{out}	TR	TFC	TVC	TC	AFC	AVC	AC	MC	MR	MP	TP
0		5									
1			15								
2				40							
3						20					
4								30			
5			125								

- What is the optimal number of bicycles for this firm? Do we have $MC=MR$ at that level of output?
- Suppose that the firm always chooses the level of output Q_{out} according to the $MR(Q_{out}) = MC(Q_{out})$ formula. Draw the supply curve for this firm by calculating optimal Q_{out} at 4 different prices: $P_{out} = 20, 25, 30, 35$ and connecting these 4 points by a line. **Remark:** as before, we assume that the price in all 4 cases is fixed and firm can sell as much goods as it wants at that price.
- Suppose that the demand for bicycles is $P = 25 - Q$. Also suppose that the firm is the only one on the bicycle market (monopolist). This implies that if the firm decides to produce Q_{out} bicycles, then it gets the price $P = 25 - Q_{out}$ for each bike. The market, as you can see, determines this price. What is the optimal Q_{out} in this case? What is the Total Profit of the firm?

I advise you to use Excel for this exercise, since there are a lot of calculations to do. You can either complete the table on your hand out or print it from Excel or whatever else is convenient for you.