Economics & Society
Singapore Management University
School of Economics & O.C.C.
Kosmas Marinakis, Ph.D.
www.kmarinakis.org

# Practice Set 4

## Monopoly & Market Efficiency

This set contains practice material for your own use. It is highly recommended to work on the problems on your own. Do not just read the provided solutions. Instead, try to solve the problems and use the solutions only when you are stuck. Reading problems that someone else has solved has the same value on your preparation like watching someone running a marathon on TV and then expecting to be able to run it, too! If you have questions on this set, please ask your section's teaching assistant.

1. Explain how market power increases with the slope of the demand curve the firm is facing.
2. Explain whether the "same intercept – double slope" rule for the MR works when you want to derive the MR for a PC firm.
3. Explain how *lobbying* can increase the social cost of monopolies if it is used for rent-seeking.
4. Explain how *advertisement* can increase the social cost of monopolies if it is used for rent-seeking.
5. Explain how *building excess capacity* can increase the social cost of monopolies if it is used for rent-seeking.
6. Katerina is the only seller of lemonade in the nationhood. The demand for lemonade is $p = 30 - 2q$, where $q$ are glasses of lemonade and $p$ is the price per glass. Her marginal cost is $MC = q$ and her fixed cost is 2.
   (a) Make a table with Katerina's $FC$, $MC$, $AC$, $TC$, $p$ and profit for quantities from 1 to 15.
   (b) How many glasses of lemonade should Katerina produce to maximize her profit?
   (c) How much should Katerina charge per glass in order to maximize her profit?
   (d) How much is the maximum profit that Katerina will make?
   (e) How many whole glasses of lemonade would Katerina produce if she acted as a PC firm?
   (f) How much would she charge if she acted as a PC firm?
   (g) How much S-R profit would she make if she acted as a PC firm?
7. A market faces demand $p = 10 - 2Q$, while the marginal cost of production is $MC = 2$.
   (a) If this market is populated by a large number of identical firms, what will be the price and the total quantity?
   (b) If the market is exploited by a single firm, at what price will this firm be selling?
   (c) Calculate the DWL when the market is exploited by a single firm.
8. You are given the demand curve $p = 30 - q$. Price is equal to 20. Calculate the consumer surplus.
9. Your consumer surplus is 40 and you are consuming 20 units at a price of 3. At which price will you consume 10 units?
10. A *tax per unit* is imposed on a PC good.
    (a) Explain how the demand of the good should be for the entire burden of the tax to fall on the consumer.
    (b) Explain how the supply of the good should be for the entire burden of the tax to fall on the producer.