FINAL PRACTICE SET OF ECO101

1. In the market for notebooks, the demand and supply equations are:

Qd= 100-2P

Qs= =20+3P

If the government imposes a $10 tax on the sellers of notebooks, calculate the following:

a. Find the original PS and CS before tax. **Ans: P= 16, Q=68 , PS= 770.78, CS= 1156**

b. New equilibrium price buyers pay, price sellers receive, and quantity sold. **Ans: Pb= 22, Ps=12, Qnew= 56**

c. New Consumer Surplus (CS) and Producer Surplus (PS). **Ans: PS= 522.76, CS= 784**

d. Tax Revenue, Deadweight Loss (DWL). **Ans: DWL= 60, Tax revenue= 560**

2. In a small, but perfectly competitive market for pineapples, there are 5 identical growers. Each grower has the following total cost function:

, where q is thousands of pounds of pineapples produced.

The market demand for pineapple is and the market supply is , where P denotes the market price of pineapple in USD, which all pineapple producers take as given.

a. Find the equilibrium price and quantity in the market of pineapples. **Ans: Price 20, Quantity 20**
b. Each grower's marginal cost based upon the TC equation is given by MC = 4+4q. Given this information, and using the answer in part (a), what is an individual grower's profit-maximizing level of production in the short-run? **Ans: q= 4**
c. Calculate the grower's total revenue, total cost, and profit at the profit-maximizing level of production. **TR= 80, TC= 98, Profit= -18 (loss)**
d. Find the equation for a representative grower's average variable cost (AVC) curve. Why would a grower choose to operate at a loss in the short run? **AVC= 4+2q**

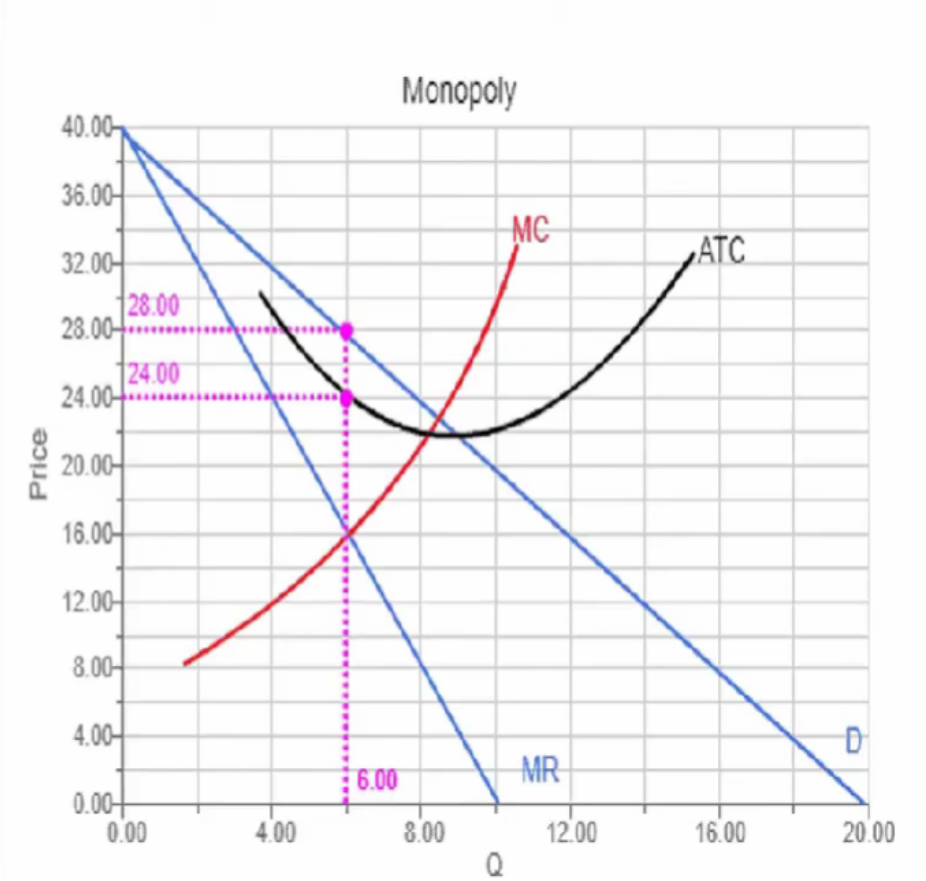
3.

L	Q	MP	TC	MC	TFC	AFC	TVC	AVC
1	23	23	670		70	3.04	600	26.09
2	55	32	1270	18.75	70	1.27	1200	21.82
3	94	39	1870	15.38	70	0.74	1800	19.15

4	120	26	2470	23.08	70	0.58	2400	20
5	142	22	3070	27.27	70	0.49	3000	21.13
6	149	7	3670	85.71	70	0.47	3600	24.16

a. Fill up the above table.
b. Illustrate AVC, MC and TFC based on the table above.
c. Explain the long run concepts of Economies of Scale, Constant returns to scale and Diseconomies of Scale.

4.



a) What is the profit maximizing output, q*? ans: 6

b) What is the profit maximizing price? Ans: 28

c) Calculate TR. Ans: 6*28

d) What is the ATC at q*? ans: 24.00

e) Calculate Total Cost. Ans: 6*24

f) Calculate the Profit. Ans: TR-TC

5. Show all the shifts and changes in equilibrium prices and quantities using separate diagrams.

a) A recent study claims that the tapioca pearls in bubble tea are linked to increased risk for cancer, creating fear among consumers. What will happen in the market for bubble tea?

b) In addition to the study report in a), you are also told that fruit smoothies are good alternatives to bubble tea. At the same time, you know that the extended summer has invigorated fruit harvests. Illustrate the effect of this on the market of Fruit smoothies

c) Teaching assistants consider microwaveable meals an inferior good. This semester, they are greeted with bad news as the Department of Economics cuts their stipends by 15%. What will be the new market equilibrium for microwavable meals?

d) Wisconsin produces fine cheese using cow's milk; however, mad cow disease has wiped out half the population of cows in Wisconsin. Illustrate the effect of this on the market of fine cheese.