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HW#11 Due November 24, 2020

3. Consider total cost and total revenue given in the following table:

Quantity	0		1		2		3		4		5		6		7	
Total cost	$8	1	9	1	10	1	11	2	13	6	19	8	27	10	37	
Total revenue	$0	8	8	8	16	8	24	8	32	8	40	8	48	8	56	MR=MC

a. Calculate profit for each quantity. How much should the firm produce to maximize profit?

b. Calculate marginal revenue and marginal cost for each quantity. Graph them. (*Hint*: Put the points between whole numbers. For example, the marginal cost between 2 and 3 should be graphed at $2\frac{1}{2}$.) At what quantity do these curves cross? How does this relate to your answer to part (a)?

c. Can you tell whether this firm is in a competitive industry? If so, can you tell whether the industry is in a long-run equilibrium?

7. A profit-maximizing firm in a competitive market is currently producing 100 units of output. It has average revenue of $10, average total cost of $8, and fixed cost of $200.

a. What is its profit?

b. What is its marginal cost?

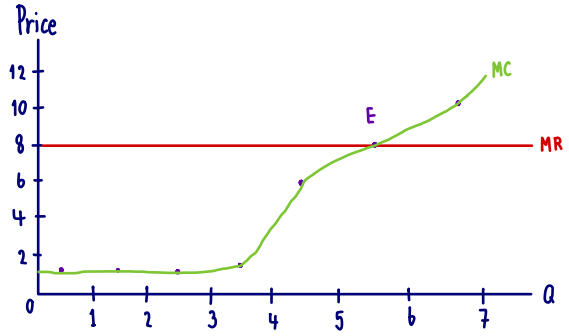
c. What is its average variable cost?

d. Is the efficient scale of the firm more than, less than, or exactly 100 units?

i.e. Is AC at its minimum?

3.) a.) To maximize the profit the firm should produce between quantity 5-6 because the MR is equal to Mc.

b.)



MC = MR when produce between Q_5 and Q_6

MC = 8
MR = 8
Intersected.

C.) In this situation it is "Perfect competition" because MR = P = D = AR or MR has the same price according to quantity and the graph of MR is horizoned line.

7.) a.) $TR = PQ = P(100) = 10(100) = 1000$

$TC = 200 + 8(100) = 1000 \quad = 1000$

0 Profit

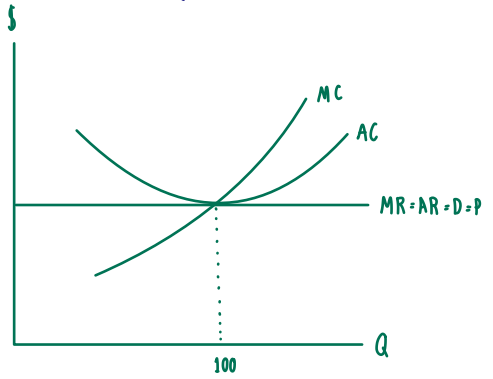
Profit = 0

b.) MC = 8

c.) AVC = 8

d.) MC = 8

AC = 8



If the firm produce less than 100 unit, they will gain more profit.
But if they produce more than 100 unit they will start to lose money.