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	9	10	11	13	19	27	37
Total revenue	$0	8	16	24	32	40	48	56

   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?

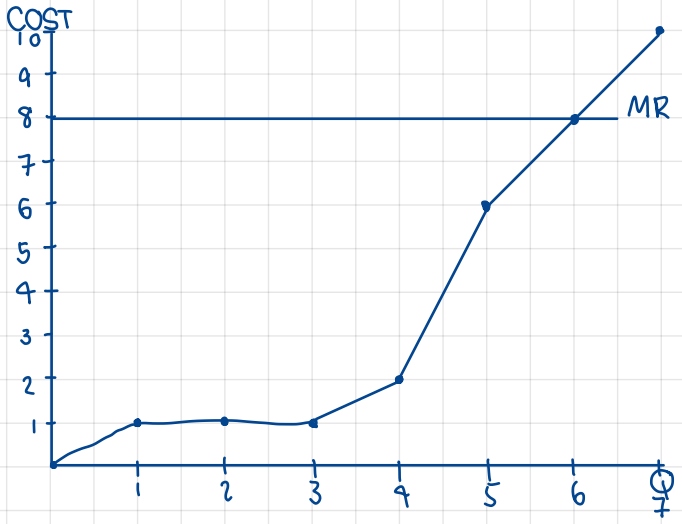
Q3. a)

Q	0	1	2	3	4	5	6	7
Revenue	-8	-1	6	13		21	21	19

firm should produce 5, 6 units inorder to maximize the profit at 19

b) Marginal cost = $\frac{d}{dQ}(TC)$ or $\frac{\Delta TC}{\Delta Q}$

Q	0	1	2	3	4	5	6	7
MC	0	1	1	1	2	6	8	10
MR	8	8	8	8	8	8	8	8



Q7. AR = $\frac{TR}{Q}$ = 10 AC = $\frac{TC}{Q}$ = 8 Fixed cost = 200

a). find total revenue and cost

$10 = \frac{TR}{100} \rightarrow TR = 1000$ $8 = \frac{TC}{100} \rightarrow TC = 800$

total Profit = 1000 - 800 = 2000

b. what is the marginal cost?

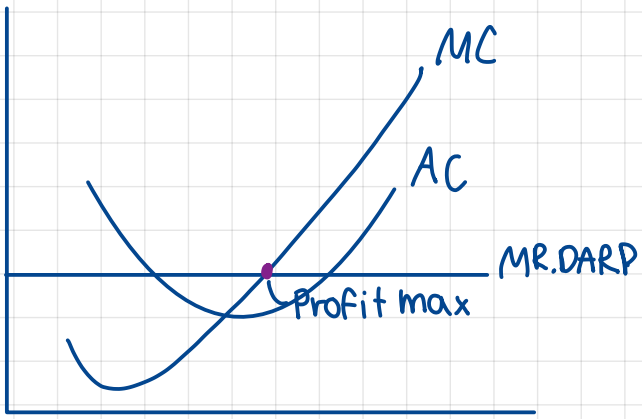
MR = MC so = 10

c. AVC = $\frac{TVC}{Q}$

TC = TFC - TVC

800 = 200 - TVC

TVC = $\frac{600}{100}$ = 6 #



Profit maximizing occurs when MR = MC

d. AC at it's minimium when AC=MC

AC=6 and mc is10

so MC>AC, which means it not efficient at 100unit but it will if scale produce less than 100.

↑ ผลิตน้อย produce less ลงผลิตน้อย ๆ ให้ MC = AC it will be efficient