

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

- Calculate profit for each quantity. How much should the firm produce to maximize profit?
- 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 \(a\)](#)?
- 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.

- What is its profit? **200**
- What is its marginal cost? **10**
- What is its average variable cost? **6**
- Is the efficient scale of the firm more than, less than, or exactly 100 units?

i.e. Is AC at its minimum?

$$\begin{aligned} \text{a). profit} &= \text{total Revenue} - \text{total cost} \\ &= 100(10 - 8) \end{aligned}$$

$$= 200$$

b).

$$\begin{aligned} \text{marginal cost} &= \text{marginal Revenue} \\ 10 &= 10 \end{aligned}$$

marginal Revenue = average

HW7.1 Due November 24, 2020

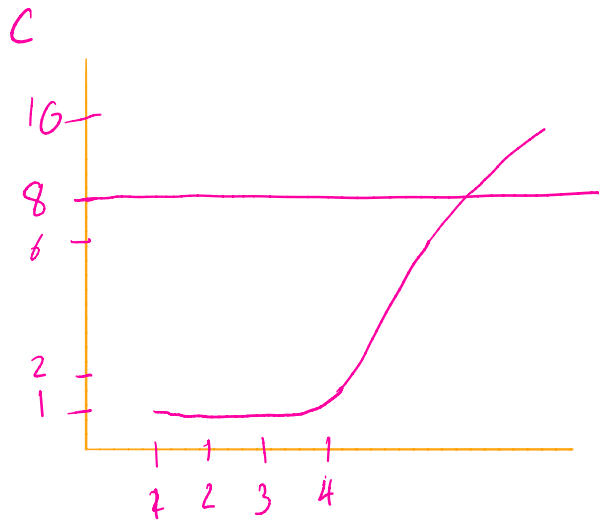
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- Can you tell whether this firm is in a competitive industry? If so, can you tell whether the industry is in a long-run equilibrium?

a. firm should produce at 5.5 quantity to maximize profit.

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



c. yes because the price is constant
and it is in long run because have no
fixed cost