

4. Nimbus, Inc., makes brooms and then sells them door-to-door. Here is the relationship between the number of workers and Nimbus's output during a given day:

Workers	Output	Marginal Product	Total Cost	Average Total Cost	Marginal Cost
0	0	0	0	0	0
1	20	20	300	15	5
2	50	30	400	8	3.33
3	90	40	500	5.56	2.5
4	120	30	600	5	3.33
5	140	20	700	5	5
6	150	10	800	5.33	10
7	155	5	900	5.8	20

variable cost = 100
fixed cost = 200

- Fill in the column of marginal products. What pattern do you see? How might you explain it?
 - A worker costs \$100 a day, and the firm has fixed costs of \$200. Use this information to fill in the column for total cost.
 - Fill in the column for average total cost. (Recall that $ATC = TC/Q$.) What pattern do you see?
 - Now fill in the column for marginal cost. (Recall that $MC = \Delta TC / \Delta Q$.) What pattern do you see?
5. You are the chief financial officer for a firm that sells gaming consoles. Your firm has the following average-total-cost schedule:

Quantity	Average Total Cost
600 consoles	\$300
601	301

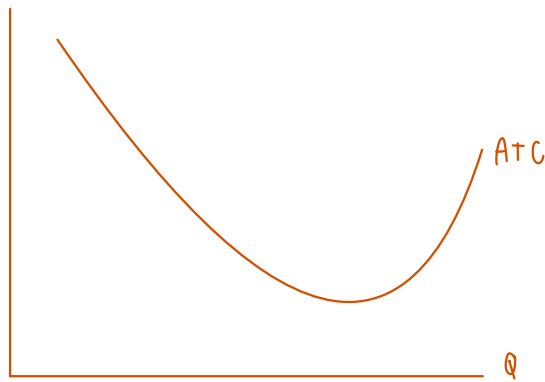
Your current level of production is 600 consoles, all of which have been sold. Someone calls, desperate to buy one of your consoles. The caller offers you \$550 for it. Should you accept the offer? Why or why not?

4.) a.) I see it increase until 40 and then it start to fall down.

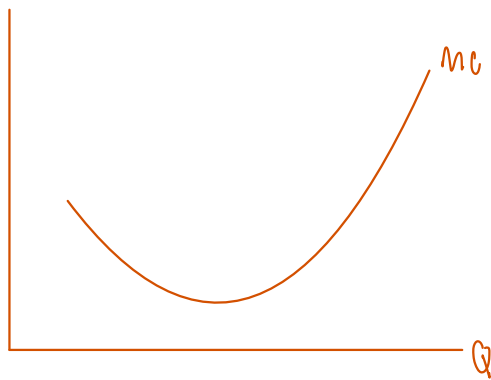
for example, if owner hire worker to do the work and start to hire more there will be less effective because there are too many workers.

c.) U-shape curve

ex.



d.) U-shape curve



$$\begin{aligned} 5.) \text{ total cost } 600 \times 300 &= 180,000 \\ 601 \times 301 &= 180,901 \end{aligned}$$

$$\text{marginal cost} = 180,901 - 180,000 = 901$$

$\therefore$ I shouldn't take the offer because

marginal cost exceed marginal benefit