

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		\$200	\$0	
		20			\$5
1	20		\$300	\$15	
		30			\$3.34
2	50		\$400	\$8	
		40			\$2.5
3	90		\$500	\$5.56	
		30			\$3.34
4	120		\$600	\$5	
		20			\$5
5	140		\$700	\$5	
		10			\$6
6	150		\$800	\$5.34	
		5			\$20
7	155		\$900	\$5.81	

- 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

$$TC = ATC \cdot Q$$

$$\$180,000$$

$$\$180,901$$

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.) the marginal products are decreasing after the 4th worker and increasing at the addition of first 3 workers. The law of diminishing marginal returns can explain this situation as the company hires more workers leading to the increasing number of output due to the specialization of workers; nevertheless, the marginal products will finally decrease due to fixed resources.

c.) The average total cost decreases at first, but when it reaches the minimum of \$5 at the quantity of 100 brooms, then it starts to increase.

The marginal cost decreases at first, but when it

d.) reaches the minimum of \$2.5 at the quantity of 90 brooms, then it starts to increase and intersects the ATC at its minimum of \$5

5. I will not accept this offer because the marginal cost for producing 60th computer is \$500 but the seller just only offers \$550 for it