

HW#10 Due November 10, 2020

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	∞	
		20	↓ 100		5
1	20	30	↓ 100	300	3.33
		40	↓ 100		2.5
2	50	30	↓ 100	400	3.33
		20	↓ 100		5
3	90	10	↓ 100	500	10
		5	↓ 100		20
4	120		600	150	
5	140		700	190	
6	150		800	133.33	
7	155		900	128.57	

- a. Fill in the column of marginal products. What pattern do you see? How might you explain it?
The pattern is increase till output 90 and decrease cause the need of the product is enough
- b. 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.
- c. Fill in the column for average total cost. (Recall that $ATC = TC/Q$.) What pattern do you see?
- d. Now fill in the column for marginal cost. (Recall that $MC = \Delta TC / \Delta Q$.) What pattern do you see?
Decrease
Decrease and then increase
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?

I should accept the deal cost to make another one consoles is around 300\$ but they offer for 550\$ so we should accept