

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		—	—	
		—			—
1	20		—	—	
		—			—
2	50		—	—	
		—			—
3	90		—	—	
		—			—
4	120		—	—	
		—			—
5	140		—	—	
		—			—
6	150		—	—	
		—			—
7	155		—	—	

- 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?