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HW#11 Due April 29, 2021

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			$25
3	90		$500	$5.56	
		30			$3.34
4	120		$600	$5	
		20			$5
5	140		$700	$5	
		10			$10
6	150		$800	$5.34	
		5			$20
7	155		$900	$5.81	

a. Fill in the column of marginal products. What pattern do you see? How might you explain it?

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?

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	TC (ATC·Q)
600 consoles	$300	$180,000
601	301	$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?