

CONCEPT: THE RELATIONSHIP BETWEEN AVERAGE COST AND MARGINAL COST

- The average cost will rise or fall depending on the _____ of the next unit.

EXAMPLE: Semester and Cumulative GPAs

	Semester GPA (marginal GPA)	Cumulative GPA (average GPA)
<i>Freshman Year</i>		
Fall	1.50	
Spring	3.00	
<i>Sophomore Year</i>		
Fall	2.80	
Spring	1.60	

☐ When $MC > AC$, the average cost will _____ when producing another unit.

☐ When $MC < AC$, the average cost will _____ when producing another unit.

- Patterns of the MC, AFC, AVC, and ATC curves:

Total Quantity of Pizzas	Fixed Costs (Costs of Ovens)	Variable Costs (Costs of Workers)	Total Cost	Marginal Cost per Pizza	$AFC = FC/Q$	$AVC = VC/Q$	$ATC = TC/Q$ or $AFC + AVC$
0	100	0	100	-	-	-	-
30	100	80	180	2.67			
80	100	160	260	1.6			
150	100	240	340	1.14			
180	100	320	420	2.67			
190	100	400	500	8.00			

☐ As output increases, MC _____

☐ As output increases, AFC _____

☐ As output increases, AVC _____

☐ As output increases, ATC _____

PRACTICE: A firm is currently producing 100 units with an average total cost of \$44 and a marginal cost of \$32. If it were to increase production to 101 units, which of the following must be true?

- a) Average total cost would decrease.
- b) Average total cost would increase.
- c) Marginal cost would decrease.
- d) Marginal cost would increase.

PRACTICE: The government imposes a \$10,000 per year inspection fee on all restaurants. Which cost curves are affected?

- a) Average total cost and marginal cost
- b) Average total cost and average fixed cost
- c) Average variable cost and marginal cost
- d) Average variable cost and average fixed cost

PRACTICE: A firm is producing 1,500 units at a total cost of \$15,000. If it were to increase production to 1,501 units, its total cost would rise to \$15,012. Which of the following is true?

- a) Marginal cost is \$10 and average variable cost is \$12
- b) Marginal cost is \$12 and average variable cost is \$10
- c) Marginal cost is \$10 and average total cost is \$12
- d) Marginal cost is \$12 and average total cost is \$10