CONCORDIA COLLEGE
MOORHEAD, MINNESOTA

- Name: ____________________
- Date: ____________________
- Section: ____________________

BUS 201: Principles of Global Economics

Problem Set #5

Fall 2025

INSTRUCTIONS:

- Write your full name, date, and section clearly at the top of the first page.
- This problem set is designed as a check-in assignment to help you practice the core ideas. It is not intended to be difficult, but you are expected to think carefully about your answers.
- For multiple-choice problems, circle the best answer.
- For short-answer problems, limit your response to no more than 4 sentences. Be concise but complete, and use economic reasoning in your answers.
- You may use your textbook, lecture slides, and personal notes.

Problem 1. Multiple Choice

1.A. Implicit costs are defined as:

a) Costs that require a monetary payment by the firm.
b) Costs that do not involve a monetary outlay but are opportunity costs.
c) Costs that remain constant regardless of output.
d) Costs that decrease as output increases.

1.B. Diminishing marginal product implies that:

a) Total output falls as more workers are hired.
b) Each additional worker increases output by more than the previous one.
c) Each additional worker increases output by less than the previous one.
d) Marginal cost must be falling as output rises.

1.C. The efficient scale of a firm is the quantity where:

a) Marginal cost equals average variable cost.
b) Average total cost is minimized.
c) Marginal revenue equals marginal cost.
d) Fixed costs are zero.

1.D. In a competitive market, a firm maximizes profit by producing the quantity at which:

a) Price equals average total cost.
b) Marginal revenue equals marginal cost.
c) Average variable cost equals average total cost.
d) Price equals average variable cost.

1.E. A firm will shut down in the short run if:

a) Price is below average total cost.
b) Price is below average variable cost.
c) Marginal cost is rising.
d) Fixed costs increase.

Problem 1. Multiple Choice (continued)

1.F. In the long run, firms in a competitive market:

a) Can earn persistent positive economic profits.
b) Exit the market if price is below average total cost.
c) Produce at the minimum of average variable cost.
d) Face a downward-sloping marginal revenue curve.

1.G. When new firms enter a competitive market:

a) Market supply decreases and price rises.
b) Market supply increases and price falls.
c) Existing firms earn higher profits.
d) Long-run equilibrium price increases.

1.H. Fixed costs are best described as:

a) Costs that rise as output increases.
b) Costs that must be paid even if output is zero.
c) Costs that vary directly with production.
d) Costs that equal marginal cost at the efficient scale.

1.I. In a competitive market, marginal revenue equals:

a) Average total cost.
b) The market price.
c) The minimum of variable cost.
d) The difference between price and average cost.

1.J. If firms in a competitive market are making positive economic profits, we expect that in the long run:

a) Some firms will exit the market.
b) The market price will rise.
c) New firms will enter the market, driving profits to zero.
d) Average total cost will increase for all firms.

Problem 2. True / False

Determine whether each statement is `TRUE` or `FALSE`. If you deem that the statement is `FALSE`, you MUST justify your verdict by providing a brief explanation.

2.A. If marginal cost is rising, marginal product must be rising as well.

2.B. Average fixed cost always decreases as output rises.

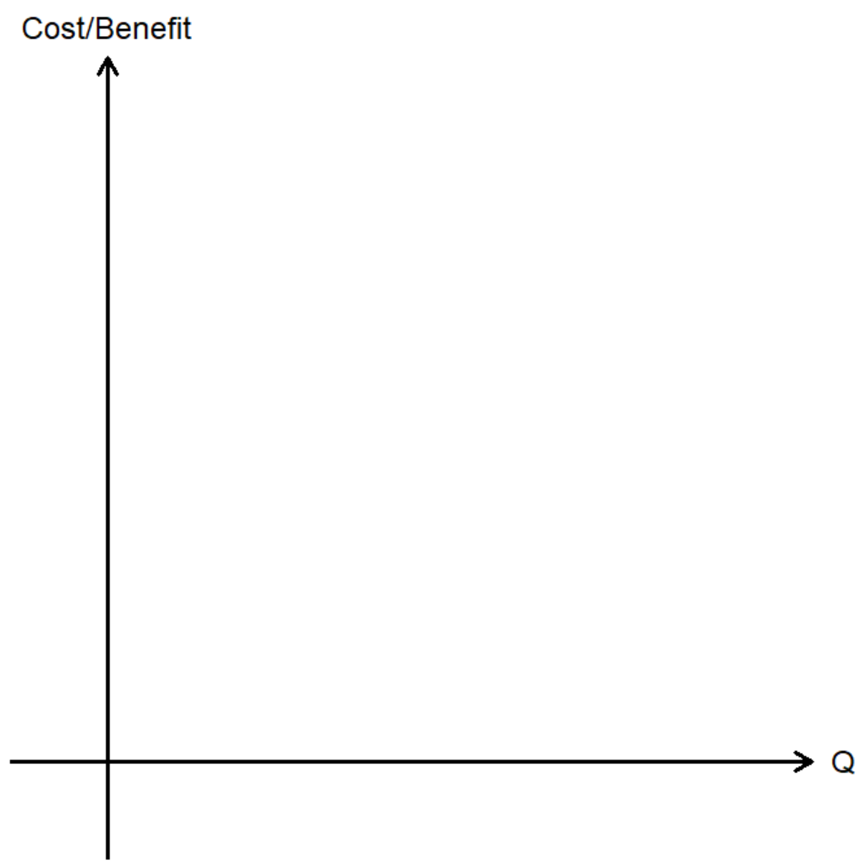
2.C. In the short run, a firm continues to operate as long as price is greater than or equal to average variable cost.

2.D. In long-run competitive equilibrium, price equals marginal cost and average total cost.

Problem 3. Short Answer

3.A. Using a properly labeled cost diagram, illustrate the following for a competitive firm. On your diagram, clearly label:

- The Average Total Cost (ATC) curve,
- The Average Variable Cost (AVC) curve,
- The competitive firm's short-run supply curve.



Problem 3. Short Answer

3.B. Consider the following cost data for a firm. The fixed cost (FC) is constant at $100 for all quantities. Using the information on total cost and fixed cost, compute the variable cost (VC) and marginal cost (MC) for quantities from Q=1 to Q=5.

Q	TC	FC	VC	MC
0	100	100		N/A
1	140	100		
2	185	100		
3	235	100		
4	290	100		
5	350	100		

3.C. Explain why diminishing marginal product causes the marginal cost curve to rise. Provide a concise economic explanation.

Problem 3. Short Answer

3.D. A competitive firm faces a market price of $50. Its total cost at different output levels are listed below:

- First, use the information in the table to compute the firm's marginal cost (MC) and marginal revenue (MR).
- Then, determine the profit-maximizing quantity.

Q	P	MR	TC	MC
0	50		200	N/A
1	50		210	
2	50		225	
3	50		260	
4	50		300	
5	50		350	
6	50		410	
7	50		485	
8	50		590	
9	50		700	

- Original Score: ____________
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