

Economics 101: Basic Economic Principles

Problem Set #3 (due by **at the beginning of class on Wednesday, the 5th of March**)

This problem set covers chapter 9.

Instructions: Please **type** your answers to the following questions, making **sure you include explanations where required**. You are encouraged to work with a partner if you would like to. If you work in a group, be sure to include the names of each group member and hand in just one copy of the problem set for the group.

Part I: Multiple Choice Questions.

Instructions: For each multiple choice question, please include a short explanation with your answer. Be sure to show your work whenever appropriate.

1. Which of these questions **best** illustrates the “framing effects” studied by behavioral economists?
 - A) Which would you rather have after lunch today: an apple or an orange?
 - B) How much would you rather receive: \$100 while everyone else gets \$110, or \$80 like everyone else?
 - C) Where would you rather invest your funds in: stocks or gold certificates?
 - D) What would you rather do: go to college and postpone having a full-time job, or forgo college and get a full-time job now?
2. If a firm wanted to know how much it would save by producing one less unit of output, it would look to:
 - A) MC.
 - B) ATC.
 - C) AVC.
 - D) AFC.

Part II: Chapter 9: Production Costs in the short and long run.

1. Jane quit her job at IBM where she earned \$50,000 a year. She cashed in \$50,000 in corporate bonds that earned 10% interest annually to buy a mini-bus. Jane has decided to buy the mini-bus and set up a commuter service between Lincoln and Omaha, Nebraska. There are 1000 people who will each pay \$400 a year for the commuter service; \$280 from each person goes for gas, maintenance, insurance, and depreciation. She estimates that her entrepreneurial skills would have typically yielded a normal profit of \$5,000 per year in another business.
 - A) What are Jane's total revenues? Her accounting profit? (Be sure to show your work.)
 - B) List the implicit costs that Jane has not included in her description of costs per person.
 - C) What is Jane's pure economic profit (loss)? Should Jane stay in business?

2. The table below shows the total production of a firm as the quantity of labor employed increases. The quantities of all other resources employed are constant. Compute the marginal and average products and enter them in the table.

Inputs of labor	Total product	Marginal product of labor	Average product of labor
0	0	—	—
1	40	(0-1)_____	_____
2	100	(1-2)_____	_____
3	165	(2-3)_____	_____
4	200	(3-4)_____	_____
5	225	(4-5)_____	_____
6	240	(5-6)_____	_____
7	245	(6-7)_____	_____
8	240	(7-8)_____	_____

(a) Over what levels of output are there increasing average returns to labor and over what levels of output are there decreasing average returns to labor? At what point do marginal returns to labor begin to decline?

3. Problem #2 and Problem #6 on page 194 in the textbook.