ECN 201, Spring 2001 **NAME:**_____
Prof. Bruce Blonigen SS#:_____

Homework 3

Due: Beginning of discussion sections in week 6.

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1) Complete the following table, where L is units of labor, Q is units of output and MP is the marginal product of labor and then use to answer questions 1-6.

L	Q	MP	TVC	TC	MC	ATC
0	0		$0	$12		
1	6		$3	$15		
2	15		$6			
3	21		$9			
4	24		$12			
5	26		$15			

2) At what level of labor input do marginal returns to labor begin to diminish?_____

3) What is the average variable cost when Q=$24? _____

4) What is this firm's total fixed cost? _____

5) What is the wage rate? _____

6) Graph MC and ATC with respect to Q. Clearly label your axis and the MC and ATC curves.

ECN 201, Winter 2000 **NAME: _____**
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Read the Wall Street Journal article "United Plans Corporate-Jet Service To Attract High-End Passengers" from Thursday, April 26, 2001 and use to answer questions 7-10.

7) Which of the following are fixed costs and which are variable costs for providing an airline flight to a passenger? (Hint: think about which ones vary as the number of passengers on the plane varies).

A) Fuel costs (fixed or variable costs): _____
B) Cost of the plane (fixed or variable costs): _____
C) Cost of providing a meal to the passengers (fixed or variable cost): _____
D) Pilot and co-pilots salary (fixed or variable cost): _____

8) The airline industry is often described as one where there are very high fixed costs and very low and constant marginal costs to provide their product. Suppose that the fixed costs are $500,000 and the marginal costs are $100 for every flight sold. Fill in the table below and then graph MC and ATC with respect to Q. Clearly label your axis and the MC and ATC curves.

Q	TFC	TVC	TC	MC	ATC
1000					
5000					
10000					
15000					
20000					

Graph:

9) At what point does diminishing marginal returns begin in this airline example? Explain.

10) The article states at one point: "The lure of corporate jets goes beyond comfort and convenience -- in some cases, they can be cost-efficient. For instance, a company might buy a 1/16th share in a seven-passenger Cessna Citation V Ultra for a one-time fee of $375,000, pay a monthly management fee of $5,225 and pay an hourly rate of $1,318 for the 50 hours of flying it is entitled to in a year. Sounds pricey, perhaps, but after the one-time fee, the company's hourly cost to use the plane is around $2,500. Flying four people on a trip to three cities in a day would not only save time, but might also be cheaper than flying first class on a commercial jet."

If it would normally cost the company $1500 per person per hour to fly its premier employees on a commercial jet, would the company decide instead on the corporate jet plan above, assuming that it could fill the seven-seat planes for the 50 hours on such a corporate jet plan? Answer yes or no, and show your calculations.

What would be the decision if the company was only looking to fly seven people for 40 hours? Show your calculations and answer "yes" or "no".