Problem Set #5 Name:_____
PAI 897
Professor John McPeak

1) Complete the following table.

Output	Fixed Cost	Average Fixed Cost	Total Cost	Variable Cost	Average Cost	Ave. Variable Cost	Marginal Cost
0	12	NA		NA	NA	NA	NA
1			23				
2			33				
3			44				
4			56				
5			69				
6			84				
7			101				
8			121				

a) Is this a short run or long run information on cost? Why?

b) If the price of the good produced is currently 13, what level of output is the profit maximizing level?

c) Draw the fixed cost, the variable cost, and total cost based on the information in this table.

2) Using the information in the table in problem one, draw an average variable cost curve, an average fixed cost curve, an average cost curve and a marginal cost curve on a single graph. Explain the reasons for the shape of each, and the implications of where the curves cross each other.

3) Define the seven short run cost concepts.

Which of these are applicable in the long run? Why?

4) Assume the rental rate of capital is 4, and the wage rate is 5.
    a. Draw an isocost curve for a cost level of 200.

    b. Repeat your graph from (a) and add in an isoquant tangent to the isocost for $200. What should the marginal rate of technical substitution be at an economically efficient bundle?

5) My variable cost of producing rakes is $5,000 per day, and the fixed costs of running my rake factory are $120,000 per 30 day month (we work every day). Below what level of revenue would I be better off shutting down and not producing any rakes?

6) Describe the expansion path.
   a. Define the expansion path.

   b. Illustrate on a graph how the expansion path is derived.

   c. Are there points on the expansion path that are technically efficient but are not economically efficient? Why or why not?

   d. Can we identify a profit maximization point based on the information contained in the expansion path? Why or why not?