Econ 3324   Spring 2010

Managerial Economics   R. Claycombe

First Exam

Write all answers in your blue book and show all work there. Return your exam and

printout(s) in your blue book.

35 pts.
1) Suppose that firm A's demand is given as $P = 20 - 3Q$
a) What is the MR equation?
b) What are the P and Q that maximize revenue?
c) Is this what we usually think of that the firm wants to maximize? Explain.
d) We worked on a problem where revenue maximization was the firm's objective.
Explain when this makes sense.
e) If $MC = 5 + 1.5Q$, what are the P and Q that maximize profit?
f) Can the profit maximizing Q ever be greater than the quantity that maximizes
revenue? Why?
g) If you have 2 providers, B and C, and
      and $TC_B = 10 + 5Q + .75Q^2$
      and $TC_C = 5 + 10Q + 2Q^2$
which one would you choose. Show work.

15 pts.
2) Suppose $P = 40 - 30Q^{1/2}$
a) Write the TR equation.
b) Write the MR equation.
c) Sketch these curves.

20 pts.
3) Computer Problem
Set up a spread sheet to find:
a) Profit max when $P = 50 - .1Q$ and $AC = 30 - Q + .1Q^2$
b) Add cells that show MR and MC
c) Add cells that show that the mark up is a the profit maximizing level
d) How would you solve for maximum profit if there is a firm upper limit on the level of
Q?

Over

15 pts.
4) Find MR if P = 50/(2Q +10) and sketch the functions (bonus for MR).

15 pts.
5) a)   Draw a well-labeled diagram that shows two market segments where different prices can be charged, but because of the levels of cost and demand there are no sales in one of the markets.
b) Briefly describe a common situation where market segmentation succeeds, taking care to explain why people in the high priced group don't change to low priced group.

I have neither given nor received unfair aid on this test nor am I aware of anyone else who has.

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