Wilf Csaplar Jr.   Economics 280   Homework #7   Due Thurs. 4/10

Do not write your name on the assignment. Write your name only on the back of this
sheet of paper and staple your answers on the front of this sheet of paper. Failure to
follow these directions will cost you 1 point on the assignment.

1) (20 points) Draw the D/ATC/MC diagram for a monopoly that is making money. Find
the optimal level of production and the price at this level of production. Illustrate the
profits. Explain how you got the P, Q, and profits.

2) (15 points) We stated that for a straight line demand curve, the marginal revenue curve
will have the same vertical intercept as the demand curve, but will be twice as steep as the
demand curve. We will now prove that statement. Assume that the demand function
(technically the inverse demand function) is given by P = a - bQ. Substitute that into the
equation for total revenue so that you get TR = F(Q) without any other variables.
Remember that a and b represent numbers and are not variables. Thus, they can be treated
like the number 113. Since MR comes from TR, find the MR function. Explain how you
got the MR function from the TR function. How do the intercept and slope compare to
the intercept and slope of the demand function?

3) (35 points) Draw the D/ATC/MC diagram for a monopolistically competitive firm that
is losing money. Find the optimal level of production and the price at this level of
production. State how you know they are losing money and how you got the output and
price. Illustrate the events that will occur over time. Explain why the curve(s) moved as
drawn.

4) (15 points) How can we tell that monopolies do not produce the efficient level of
output from society's point of view? Hint: How can we tell the optimum level of output
from society's point of view?

5) (15 points) If a firm has two plants, how do they determine the output of each plant?
Explain why that formula will maximize profits.