Youngberg

Econ 301—Bethany College

**Homework 08**

Answer all the following on a ***typed, stapled*** (if applicable)separate sheet of paper. You do not need to type equations and graphs. I charge 25 cents to staple your homework. Make sure that you justify your answers, use your own words, and show your work. All questions are equally weighted.

1. Use the diagram below to determine how many pounds of candy this firm should produce, where it has a profit or loss and indicate, if any, the deadweight loss. Calculate the amount of profit or loss the firm is experiencing.

2

4

6

8

10

12

14

16

18

20

2

10

8

6

4

22

20

18

16

14

12

22

P ($/lb)

Candy (millions of pounds)

**ATC**

**D**

**MC**

**MR**

1. Suppose the total cost function of a monopoly is TC = 20 + Q3 and its demand curve is P = 150 – Q2. Find the profit maximizing quantity and the amount of profit or loss the firm is making. Remember to show all your work.
2. Using the information from Question 3, determine the deadweight loss. (You will have to use integration to get the correct answer.) Remember to show all your work.
3. Suppose the demand curve for a monopsony is P = 40 – Q and the supply curve is 22 + Q. Find the monopsony’s optimal quantity and monopsony price and then use integration to determine the deadweight loss. Remember to show all your work.
4. Consider an industry of five firms with the indicated market shares:

Addit, Inc. 0.18

Branson Corp. 0.16

Cilantro 0.22

Davidson, Inc. 0.14

Euclidean Dynamics 0.30

Calculate the level of concentration in this industry using HHI. How concentrated would the Justice Department consider this industry to be? Suppose Branson Corp. and Davidson, Inc. attempt to merge. Calculate the new level of concentration if this occurs. Would the Justice Department be concerned about this merger? Why or why not?