Homework – Week 11

Name: _____

Oligopolies

1) Mays and McCovey are beer-brewing companies that operate in a duopoly (two-firm oligopoly). The daily marginal cost (MC) of producing a can of beer is constant and equals $0.60 per can. Assume that neither firm had any fixed costs, so marginal cost equals average total cost (ATC) for each firm.

The following table gives the market demand for beer in the region where Mays and McCovey operate.

Quantity	Price	Revenue
0	$1.00	$0.0
50	$0.95	$47.5
100	$0.90	$90.0
150	$0.85	$127.5
200	$0.80	$160.0
250	$0.75	$187.5
300	$0.70	$210.0
350	$0.65	$227.5
400	$0.60	$240.0
450	$0.55	$247.5
500	$0.50	$250.0

A) Suppose that Mays and McCovey form a cartel, and the firms divide the output evenly. What is the profit-maximizing price and combined quantity of output if Mays and McCovey effectively cooperate? What would be the individual profit of each firm? Explain how you arrived at these results.

B) Oligopolists often behave non-cooperatively and act in their own self-interest even though this decreases total profit in the market. Again, assume the two companies form a cartel and decide to work together. Describe the self-interested incentives faced by both firms.

C) If one firm decides to break the collusive behavior, how much would it decide to produce? What would be its expectation on price and profits?

D) If in reality both firms break the collusive behavior, how much would be the total quantity produce and market price? What would be each firms' profits? Compare this outcome to the collusive outcome and explain the difference.

2) Suppose that Espresso and Beantown are the only two firms that sell coffee. The following payoff matrix shows the profit (in millions of dollars) each company will earn depending on whether or not it decides to advertise.

		Beantown	
		Advertise	Don't Advertise
Espresso	Advertise	10, 10	18, 2
	Don't Advertise	2, 18	11, 11

A) Assume Espresso decides to advertise. How much will Beantown earn if it also decides to advertise? How much will Beantown earn if it decides not to advertise?

B) Now assume Espresso decides not to advertise. How much will Beantown earn if it decides to advertise? How much will Beantown earn if it decides not to advertise?

C) What is the dominant strategy in this game? Can this strategy be improved upon? Explain.

D) Suggest ways that would make it easier for Espresso and Beantown to reach a cooperative behavior.