You are the manger of a monopoly that sells a product to two groups of consumers in different parts of the country. Group 1’s elasticity of demand is -2, while group 2’s elasticity of demand is -6. Your marginal cost of producing the product is $10.

1. Determine your optimal markups and prices under third degree price discrimination.
2. Discuss the conditions under which third degree price discrimination enhances profits.

A monopolist can produce at a constant average (and marginal) cost of AC = MC = 5. It faces a market demand curve given by Q= 53-P.

1. Calculate the profit –maximizing price and quantity for this monopolist. Also calculate its profit.
2. Suppose a second firm enters the market. Let Q1 be the output of the first firm and Q2 be the output of the second. Market demand is now given by Q1 + Q2 =53-P. Derive the cournot equilibrium quantities. What are the resulting market price and profits for each firm?
3. Suppose there are *N* firms in the industry, all with the same constant marginal cost, MC=5. Find the Cournot equilibrium. How much will each firm produce, what will be the market price, and how much profit will each firm earn? Also, show that as *N* becomes large the market price approaches the price that would prevail under perfect competition