

# Cournot, Bertrand, Stackelberg Workout

## Market Power and Public Policy ECON 465

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### 1. Short Answer Questions

- (a) Suppose that 2 identical firms produce the same good at marginal cost  $c$  and they compete a la Bertrand. Draw the best response of Firm 1.
- (b) When do we say that a firm has market power? Can you name two sources of market power?
- (c) What are the differences between Cournot, Stackelberg, and Bertrand Competition.

### 2. Monopoly, Cournot and Stackelberg KEY -

The market demand function for gelato in Summersville is

$$Q^d = 70 - \frac{P}{2}$$

Its cost function for producing gelato is  $TC = 5 + 20Q$ .

- (a) What is fixed cost, the variable costs, average costs and marginal costs of producing gelato? Does the cost function of gelato have economies or diseconomies of scale?
- (b) Suppose that there is only ONE producer of bathing suits. Find the profit-maximizing quantity and price for bathing suits.
- (c) Suppose that firm can perfectly price discriminate (first degree price discrimination). How much will it produce? How much will its profits be?
- (d) What will be the equilibrium prices and quantities, if there are TWO firms that choose quantities simultaneously? (**Cournot Competition**).
- (e) Now assume that the first firm gets to choose quantity before the entrant. What are the quantities that these firms will produce and the price in the market (**Stackelberg Competition**). Why are these quantities different?