

Monopoly 2

Examples and Exercises

- 1 In market 1, let demand be given by $q_1 = 100 - 5p$. In market 2, let demand be given by $q_2 = 500 - 10p$. Let $Q = q_1 + q_2$. Let total costs be $C(Q) = 20 + 2Q$.
 - 1 If a monopolist is forced to charge the same price in both markets what price will that be?
 - 2 What is the price in each market if the monopolist can charge different prices in each market?
 - 3 As a consumer in market 1, which of the above do you prefer?
 - 4 Is a monopolist always better off if they can engage in Type 3 price discrimination (as opposed to charging the same unit price in all market segments)? Provide a formal argument for this proposition.

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- 1 You are a product manager at Nestle. Coffee is currently being sold to consumers in 1lb packages costing \$5 each. Market research suggests that consumers can be thought of as having two equally likely types: Type L and type S. Type L drink a lot and have a willingness to pay of $10q$, where q is package size in lbs. For type L, if $q > 5$, then their marginal value goes to 0.

Type S drink only a small amount. Type S consumers have a value of $18q$, but can never get through an entire package before it goes bad. Hence, if $q > 0.5$, then their marginal value goes to 0.

The firm is committed to continuing production of the 1lb packages, but has room to expand the product selection by adding another product-packaging configuration, and can change prices. The cost of expanding the product line is a fixed cost of size F . The marginal cost of production is equal to $0.1q$. What do you suggest?