

IO UV - Fall 2026
Exercise #3: Discriminating Monopoly (01/10/2026)

Part I

Question #1

Suppose that a monopoly can price discriminate between two markets: market 1, where the demand curve is given by $q_1 = 2 - p_1$, and market 2 where the demand curve is given by $q_2 = 4 - p_2$. Suppose that once the product is sold, it cannot be resold in the other market. That is, assume that arbitrage is impossible, say, due to strict custom inspections on the border between the two markets. Assume that the monopoly produces each unit at a cost of $c = 1$.

- a. Calculate the profit-maximizing output level that the monopoly sells in each market. Calculate the price charged in each market.
- b. Calculate the monopoly's profit level.
- c. Suppose that market 1 and 2 are now open, and all consumers are free to trade and to transfer the good costlessly between the markets. Thus, the monopoly can no longer price discriminate and has to charge a uniform price denoted by p , $p = p_1 = p_2$. Find the profit-maximizing value p .