

Problem 8

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Demand is given by $q=400p^{-2}$. Cost per unit is \$10. What are the profit maximizing price and quantity and what is the maximum profit?

$$q=400p^{-2} \quad MC=10 \quad \epsilon^d = -2$$

$$P = 10(-2 / (1-2)) = -20 / -1 = 20$$

$$q = 400p^{-2} = 400(20)^{-2} = 400 \cdot 1/400 = 1$$

$$\pi = 20 - 1 - 10$$