

## Problem 8

Saturday, January 30, 2021 4:37 PM



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?

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

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

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

$$\cancel{\pi = 20 - 1 - 10} \quad \pi = (20 - 10)(1) = 10$$