

III A firm has total revenue function given by

$$R(x) = 2800x - 8x^2 - x^3 \text{ dollars}$$

for x units of a product. Find the max. revenue from sales of that product.

IV Find the # of units x that produces the minimum average cost per unit \bar{c} :

a) $C = 0.001x^3 + 5x + 250$

b) $C = 0.02x^3 + 55x^2 + 1250$

V **Maximum Profit** A commodity has a demand function modeled by

$$p = 100 - 0.5x^2$$

and a total cost function modeled by $C = 40x + 37.5$.

(a) What price yields a maximum profit?

(b) When the profit is maximized, what is the average cost per unit?

VI **Maximum Profit** How would the answer to Exercise 15 change if the marginal cost rose from \$40 per unit to \$50 per unit? In other words, rework Exercise 15 using the cost function $C = 50x + 37.5$.