

1. Suppose a company has a cost function of $C(x) = \frac{1}{4}x^2 + 3x + 67$ dollars and a demand function of $p(x) = \frac{1}{5}(45 - x)$ dollars per unit. x represents the number of units sold.

a) Find the marginal cost and marginal revenue.

b) Use marginal cost to estimate the cost of producing the 21st unit. What is the actual cost of producing the 21st unit?

c) Use marginal revenue to estimate the revenue derived from the sale of the 21st unit. What is the actual revenue obtained from the sale of the 21st unit?

Q: What starts with “P” and ends with “E” and has more than 1000 letters?