

Marginal Cost and Revenue

Learning Objectives

- Compute and interpret marginal cost
 - Compute and interpret revenue and marginal revenue
-

Compute and interpret marginal cost

1. The cost to produce x units of a product is given by $C(x) = 9.31x + 7550$, where cost is in dollars. Calculate the marginal cost and interpret its meaning.

Compute and interpret revenue and marginal revenue

2. The revenue equation for a product is given by $R(x) = -0.46x^2 + 49.7x$, where x is units sold, and revenue is given in thousands of dollars.
 - a. Find the revenue for selling 10 items.

- b. Calculate the marginal revenue and evaluate it at the same 10 units.
- c. Interpret the marginal revenue value you found in the context of the problem.

ANSWER KEY

1. $C'(x) = 9.31$, for each additional unit produced, it will cost another \$9.31.
2. a. \$451,000, b. $R'(x) = -0.92x + 49.7$, $R'(10) = 40.5$, c. when 10 units are sold, the total revenue after producing the next unit will increase by approximately \$40,500.