

**Problem Definition**

Problem 21. Find the marginal revenue for producing  $x$  units.

$$R = 50x - 0.5x^2$$

**Solution Step 1:**

The marginal revenue is the instantaneous rate of change of the revenue function with respect to the number of units produced. That is, we compute the derivative of the revenue function. This gives

$$R'(x) = \frac{d}{dx}(50x - 0.5x^2) = 50 - x$$