

**Problem Definition**

Problem 17. Find the marginal cost for producing  $x$  units.

$$C = 4500 + 1.47x$$

**Solution Step 1:**

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

$$C'(x) = \frac{d}{dx}(4500 + 1.47x) = 1.47$$

So the marginal cost is \$1.47 per unit produced.