Exercise 109

The total cost C (in thousands of dollars) to produce a certain item is modeled by the function $C(x) = 10.50x + 28{,}500$, where x is the number of items produced. Determine the cost to produce 175 items.

Solution

Plug in $x = 175$ to the cost function.

$$C(175) = 10.50(175) + 28\,500 = 30\,337.5$$

Since this is $30\,337.5$ thousands of dollars, the total cost to produce 175 items is $\$30\,337\,500$.