

44 If the marginal revenue is given by $MR = -0.006X + 36$, find the total revenue for the sale of 75 units.

$$\begin{aligned} \rightarrow R(x) &= \int (-0.006x + 36) dx \\ &= \frac{-0.006x^2}{2} + 36x + C \\ &= -0.003x^2 + 36x + C \end{aligned}$$

to find C : $R(0) = 0$

$$0 = 0 + 0 + C \rightarrow C = 0$$

So $R(x) = -0.003x^2 + 36x$

the total revenue from the sale of 75 units
 $R(x)$ at $x=75$

$$\begin{aligned} R &= -0.003(75)^2 + 36(75) \\ &= 2683.125 \text{ \$} \end{aligned}$$