

#62

$$P = -1500 + 12x - .0004x^2$$

$$P = -.0004x^2 + 12x - 1500$$

MAX VALUE AT VERTEX

$$x = \frac{-B}{2A} = \frac{-12}{2(-.0004)} = 15,000$$

$$\begin{aligned} P &= -.0004(15,000)^2 + 12(15,000) - 1500 \\ &= 88,500 \end{aligned}$$