

3.1 Quadratic Functions: Maxima and Minima

Ex 1) $g(x) = - (x - \frac{1}{2})^2 + 9/4$

Ex 2 a) Minimum of -4 at $x = -2$

b) Maximum of -1 at $x = 2$

Ex 3) Maximum profit is \$450, when he sells 1500 cans of soda in one day.

Ex 4 a) let $x =$ ticket price, then Revenue function is:

$$R(x) = -1000x^2 + 23500x$$

b) let $R(x) = 0$, then $x = 0$ and $x = 23.5$

At a price of \$23.50, no one would attend, so no revenue produced.

c) A price of \$11.75 would maximize the revenue.

The maximum revenue would be \$138,062.50.