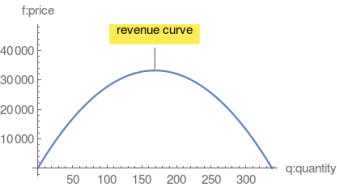


1.

1. (1) Basis for the Revenue model is a simple multiplication:

$$\text{Revenue} = \text{Price} \times \text{Quantity} = \left(-\frac{7}{6}q + 394\right) \times q = 394q - \frac{7q^2}{6}$$

Notice the latter is a quadratic:



(2) Domain starts at 0 Yen revenue up to q-intercept coordinate equal to twice the value of vertex of the Parabola:

$$\frac{2364}{7}$$

(4) The maximum occurs at the vertex q-intercept coordinate:

$$\frac{1182}{7}$$

or the amount 33264.9 Yen .