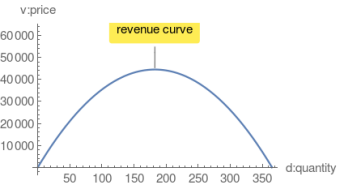


4.

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

$$\text{Revenue} = \text{Price} \times \text{Quantity} = \left(-\frac{4}{3}d + 487\right) \times d = 487d - \frac{4d^2}{3}$$

Notice the latter is a quadratic:



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

$$\frac{1461}{4}$$

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

$$\frac{1461}{8}$$

or the amount 44469.2 Yen .