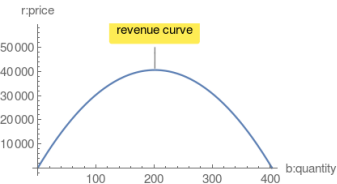


4.

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

$$\text{Revenue} = \text{Price} \times \text{Quantity} = (-1b + 403) \times b = 403b - b^2$$

Notice the latter is a quadratic:



(2) Domain starts at 0 Yen revenue up to b-intercept coordinate equal to twice the value of vertex of the Parabola:
403

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

$$\frac{403}{2}$$

or the amount 40602.3 Yen .