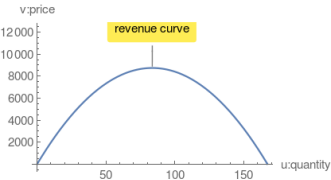


3.

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

$$\text{Revenue} = \text{Price} \times \text{Quantity} = \left(-\frac{5}{4}u + 209\right) \times u = 209u - \frac{5u^2}{4}$$

Notice the latter is a quadratic:



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

$$\frac{836}{5}$$

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

$$\frac{418}{5}$$

or the amount 8736.2 Euros .