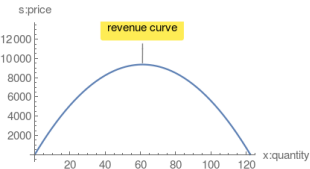


4.

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

$$\text{Revenue} = \text{Price} \times \text{Quantity} = \left(-\frac{5}{2}x + 306\right) \times x = 306x - \frac{5x^2}{2}$$

Notice the latter is a quadratic:



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

$$\frac{612}{5}$$

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

$$\frac{306}{5}$$

or the amount 9363.6 RussianRubles .