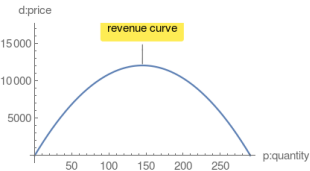


1.

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

$$\text{Revenue} = \text{Price} \times \text{Quantity} = \left(-\frac{4}{7}p + 166\right) \times p = 166p - \frac{4p^2}{7}$$

Notice the latter is a quadratic:



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

$$\frac{581}{2}$$

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

$$\frac{581}{4}$$

or the amount 12055.8 RussianRubles .