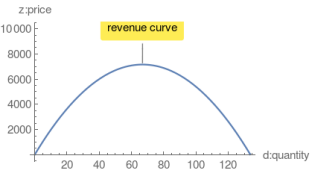


1.

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

$$\text{Revenue} = \text{Price} \times \text{Quantity} = \left(-\frac{8}{5}d + 214\right) \times d = 214d - \frac{8d^2}{5}$$

Notice the latter is a quadratic:



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

$$\frac{535}{4}$$

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

$$\frac{535}{8}$$

or the amount 7155.62 RussianRubles .