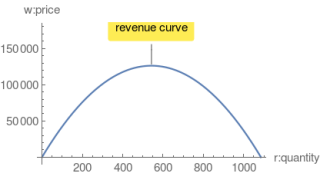


4.

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

$$\text{Revenue} = \text{Price} \times \text{Quantity} = \left(-\frac{3}{7}r + 465\right) \times r = 465r - \frac{3r^2}{7}$$

Notice the latter is a quadratic:



(2) Domain starts at 0 USDollars revenue up to r-intercept coordinate equal to twice the value of vertex of the Parabola:
1085

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

$$\frac{1085}{2}$$

or the amount 126131. USDollars .