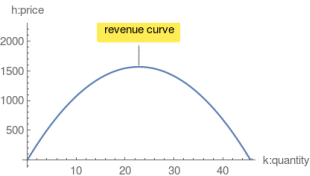


3.

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

$$\text{Revenue} = \text{Price} \times \text{Quantity} = (-3k + 137) \times k = 137k - 3k^2$$

Notice the latter is a quadratic:



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

$$\frac{137}{3}$$

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

$$\frac{137}{6}$$

or the amount 1564.08 BritishPounds .