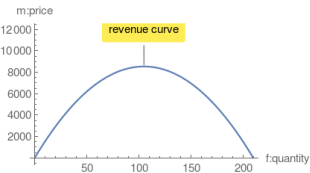


3.

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

$$\text{Revenue} = \text{Price} \times \text{Quantity} = \left(-\frac{7}{9}f + 163\right) \times f = 163f - \frac{7f^2}{9}$$

Notice the latter is a quadratic:



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

$$\frac{1467}{7}$$

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

$$\frac{1467}{14}$$

or the amount 8540.03 BritishPounds .