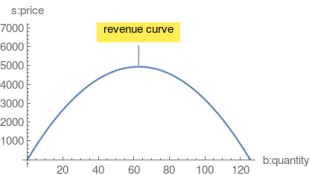


1.

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

$$\text{Revenue} = \text{Price} \times \text{Quantity} = \left(-\frac{5}{4}b + 157\right) \times b = 157b - \frac{5b^2}{4}$$

Notice the latter is a quadratic:



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

$$\frac{628}{5}$$

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

$$\frac{314}{5}$$

or the amount 4929.8 BritishPounds .