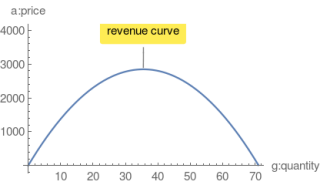


1.

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

$$\text{Revenue} = \text{Price} \times \text{Quantity} = \left(-\frac{9}{4}g + 160\right) \times g = 160g - \frac{9g^2}{4}$$

Notice the latter is a quadratic:



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

$$\frac{640}{9}$$

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

$$\frac{320}{9}$$

or the amount 2844.44 USDollars .