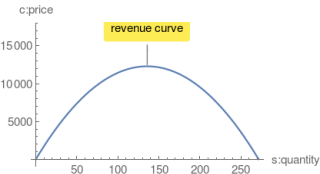


1.

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

$$\text{Revenue} = \text{Price} \times \text{Quantity} = \left(-\frac{2}{3}s + 181\right) \times s = 181s - \frac{2s^2}{3}$$

Notice the latter is a quadratic:



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

$$\frac{543}{2}$$

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

$$\frac{543}{4}$$

or the amount 12285.4 USDollars .