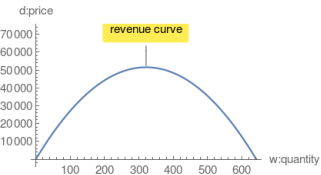


3.

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

$$\text{Revenue} = \text{Price} \times \text{Quantity} = \left(-\frac{1}{2}w + 321\right) \times w = 321w - \frac{w^2}{2}$$

Notice the latter is a quadratic:



(B) Domain starts at 0 USDollars revenue up to w-intercept coordinate equal to twice the value of vertex of the Parabola:
642

(D) The maximum occurs at the vertex w-intercept coordinate:
321

or the amount 51520.5 USDollars .