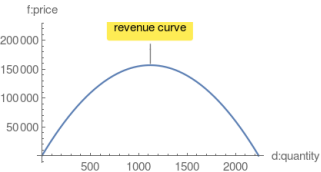


3.

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

$$\text{Revenue} = \text{Price} \times \text{Quantity} = \left(-\frac{1}{8}d + 280\right) \times d = 280d - \frac{d^2}{8}$$

Notice the latter is a quadratic:



(2) Domain starts at 0 USDollars revenue up to d-intercept coordinate equal to twice the value of vertex of the Parabola:
2240

(4) The maximum occurs at the vertex d-intercept coordinate:
1120

or the amount 156800. USDollars .