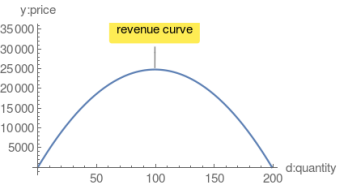


1.

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

$$\text{Revenue} = \text{Price} \times \text{Quantity} = \left(-\frac{5}{2}d + 498\right) \times d = 498d - \frac{5d^2}{2}$$

Notice the latter is a quadratic:



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

$$\frac{996}{5}$$

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

$$\frac{498}{5}$$

or the amount 24800.4 Yen .