1.

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

Revenue = Price×Quantity = $(-\frac{2}{5}y+313) \times y = 313y - \frac{2y^2}{5}$

Notice the latter is a quadratic:
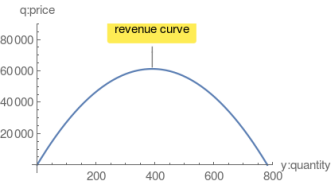
(b) Domain starts at 0 Euros revenue up to y-intercept coordinate equal to twice the value of vertex of the Parabola:

$\frac{1565}{2}$

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

$\frac{1565}{4}$

or the amount 61230.6 Euros .