1.

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

Revenue = Price×Quantity = $(-\frac{5}{9}c+403) \times c = 403c - \frac{5c^2}{9}$

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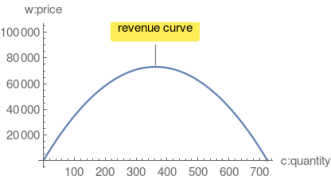
(b) Domain starts at 0 Euros revenue up to c-intercept coordinate equal to twice the value of vertex of the Parabola:

$\frac{3627}{5}$

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

$\frac{3627}{10}$

or the amount 73 084.1 Euros .