1.

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

Revenue = Price×Quantity = $(-\frac{4}{5}b+378) \times b = 378\,b - \frac{4\,b^2}{5}$

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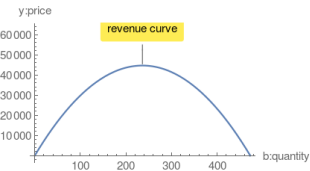
(b) Domain starts at 0 RussianRubles revenue up to b-intercept coordinate equal to twice the value of vertex of the Parabola:

$\frac{945}{2}$

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

$\frac{945}{4}$

or the amount 44651.3 RussianRubles .