1.

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

Revenue = Price×Quantity = (−6c+405) × c = $405\,c - 6\,c^2$

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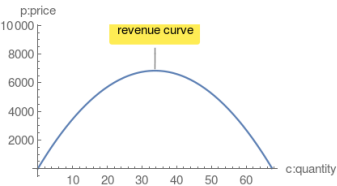
(2) Domain starts at 0 Yen revenue up to c-intercept coordinate equal to twice the value of vertex of the Parabola:

$\frac{135}{2}$

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

$\frac{135}{4}$

or the amount 6834.37 Yen .