1.

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

Revenue = Price×Quantity = $(-\frac{9}{7}d+367) \times d = 367\,d - \frac{9\,d^2}{7}$

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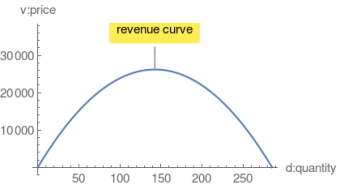
(2) Domain starts at 0 Yen revenue up to d-intercept coordinate equal to twice the value of vertex of the Parabola:

$\frac{2569}{9}$

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

$\frac{2569}{18}$

or the amount 26 189.5 Yen .