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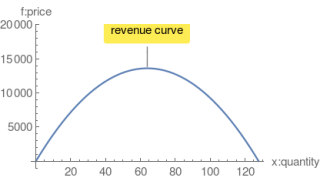
1. (A) Basis for the Revenue model is a simple multiplication:

Revenue = Price×Quantity = $(-\frac{10}{3}x + 426) \times x = 426\,x - \frac{10\,x^2}{3}$

Notice the latter is a quadratic:

(B) Domain starts at 0 USDollars revenue up to x−intercept coordinate equal to twice the value of vertex of the Parabola:

$\frac{639}{5}$

(D) The maximum occurs at the vertex x−intercept coordinate:

$\frac{639}{10}$

or the amount 13610.7 USDollars .