# 1.

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

Revenue = Price×Quantity = $(-\frac{10}{9}r+241) \times r = 241\,r - \frac{10\,r^2}{9}$

Notice the latter is a quadratic:
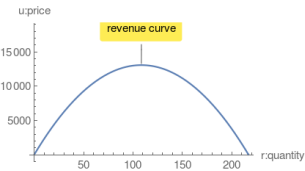


(b) Domain starts at 0 CanadianDollars revenue up to r−intercept coordinate equal to twice the value of vertex of the Parabola:

$\frac{2169}{10}$

(d) The maximum occurs at the vertex r−intercept coordinate:

$\frac{2169}{20}$

or the amount 13068.2 CanadianDollars .