

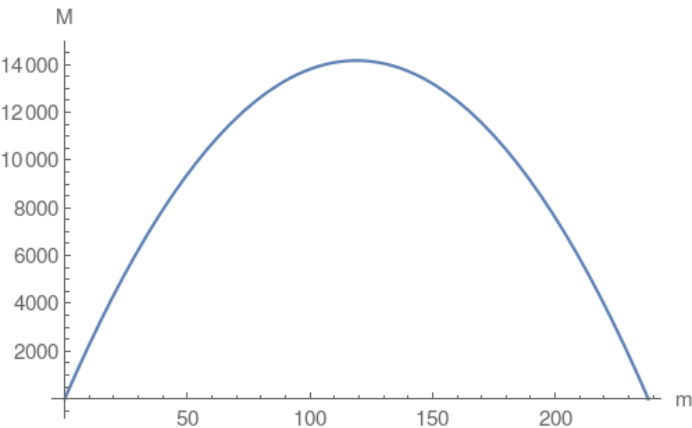
2.

Perimeter of rectangle = $2(m+a)=476$ where a is the length of the other edge of rectangle. Area of the rectangle is $= m \times a$.

Use perimeter equation

and solve for $a = \frac{476-2m}{2}$

Then reformulate the area $M = m \times a = 238m - m^2$ which turns out to be a quadratic Parabola:



Compute the vertex $\frac{476}{4}$ and then plug the vertex into the area which will compute the maximum area.