

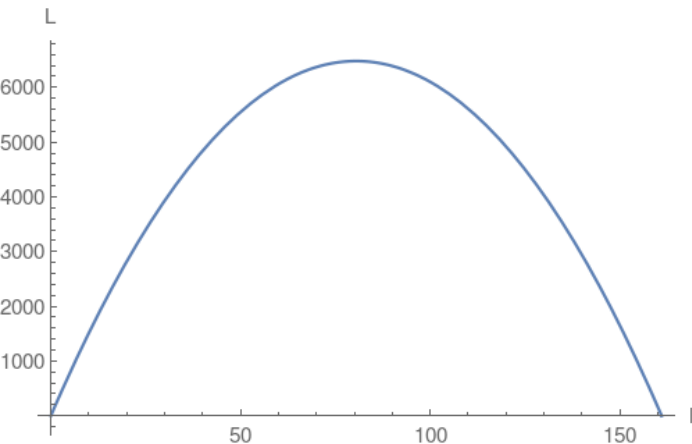
2.

2. Perimeter of rectangle = $2(l+a)=322$ where a is the length of the other edge of rectangle. Area of the rectangle is = $l \times a$.

Use perimeter equation

and solve for $a = \frac{322-2l}{2}$

Then reformulate the area $L = l \times a = 161l - l^2$ which turns out to be a quadratic Parabola:



Compute the vertex $\frac{322}{2}$ and then plug the vertex into the area which will compute the maximum area.