

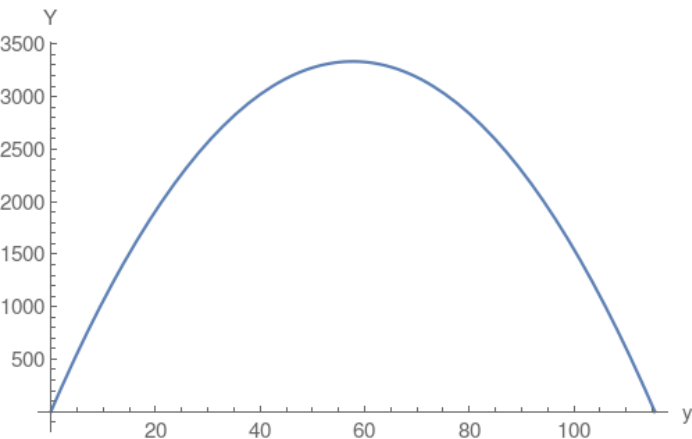
2.

2. Perimeter of rectangle = $2(y+a)=231$ where a is the length of the other edge of rectangle. Area of the rectangle is $= y \times a$.

Use perimeter equation

and solve for $a = \frac{231-2y}{2}$

Then reformulate the area $Y = y \times a = \frac{231y}{2} - y^2$ which turns out to be a quadratic Parabola:



Compute the vertex $\frac{231}{4}$ and then plug the vertex into the area which will compute the maximum area.