

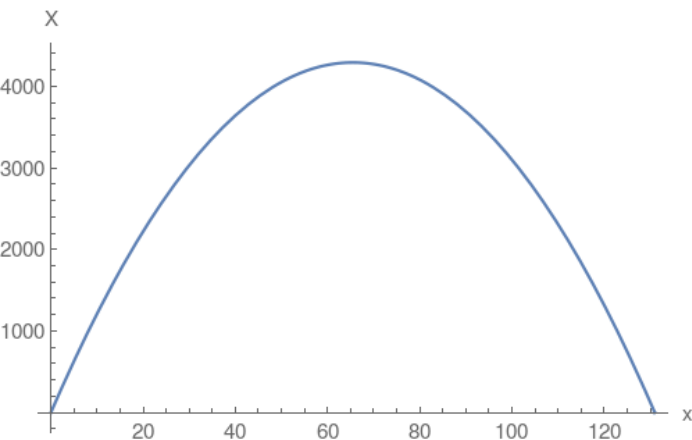
2.

2. Perimeter of rectangle =  $2(x+a)=262$  where  $a$  is the length of the other edge of rectangle. Area of the rectangle is =  $x \times a$ .

Use perimeter equation

and solve for  $a = \frac{262-2x}{2}$

Then reformulate the area  $X = x \times a = 131x - x^2$  which turns out to be a quadratic Parabola:



Compute the vertex  $\frac{262}{4}$  and then plug the vertex into the area which will compute the maximum area.