

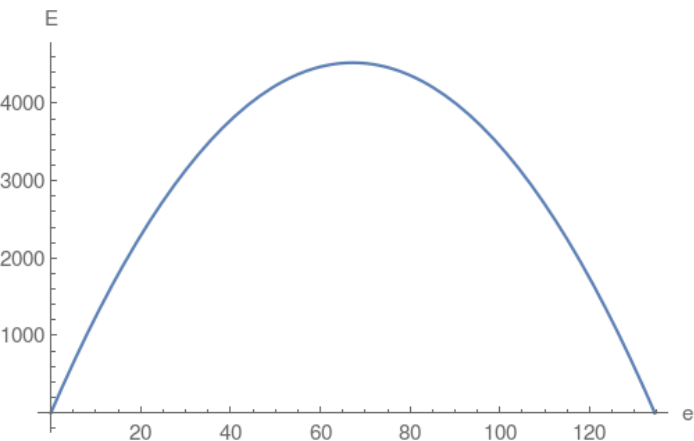
2.

2. Perimeter of rectangle =  $2(e+a)=269$  where  $a$  is the length of the other edge of rectangle. Area of the rectangle is =  $e \times a$ .

Use perimeter equation

and solve for  $a = \frac{269-2e}{2}$

Then reformulate the area  $E = e \times a = \frac{269e}{2} - e^2$  which turns out to be a quadratic Parabola:



Compute the vertex  $\frac{269}{4}$  and then plug the vertex into the area which will compute the maximum area.