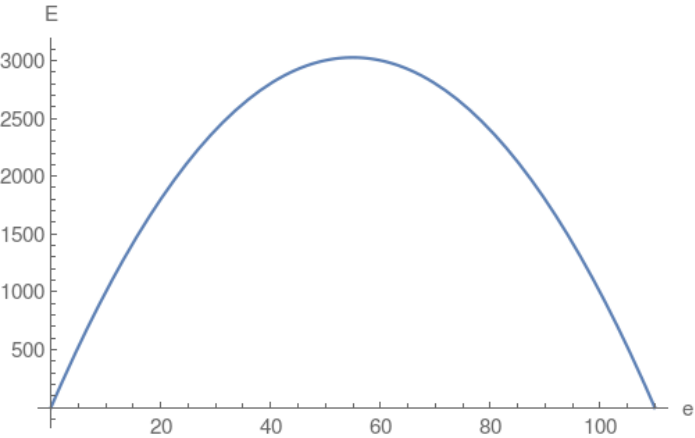
## 2.

2. Perimeter of rectangle = $2(e+a)=220$ 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= $\frac{220-2e}{2}$

Then reformulate the area E= $e \times a = 110\,e - e^2$ which turns out to be a quadratic Parabola:




Compute the vertex $\frac{220}{4}$ and then plug the vertex into the area which will compute the maximum area.