

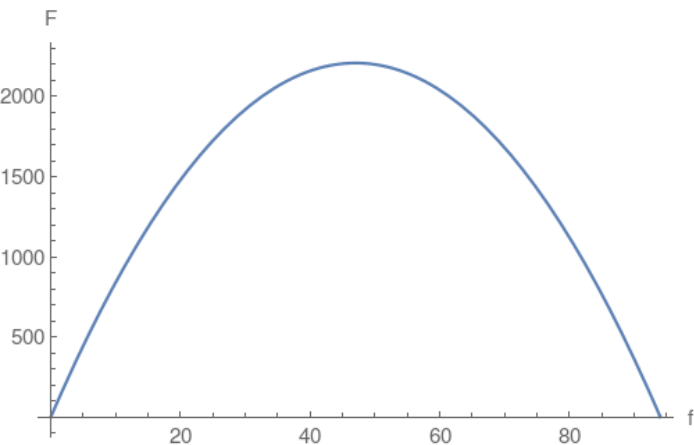
3.

3. Perimeter of rectangle =  $2(f+a)=188$  where  $a$  is the length of the other edge of rectangle. Area of the rectangle is =  $f \times a$ .

Use perimeter equation

and solve for  $a = \frac{188-2f}{2}$

Then reformulate the area  $F = f \times a = 94f - f^2$  which turns out to be a quadratic Parabola:



Compute the vertex  $\frac{188}{2}$  and then plug the vertex into the area which will compute the maximum area.