

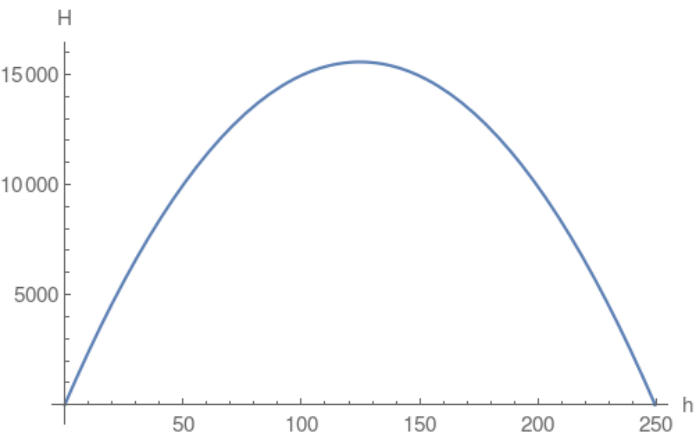
2.

2. Perimeter of rectangle =  $2(h+a)=499$  where  $a$  is the length of the other edge of rectangle. Area of the rectangle is  $= h \times a$ .

Use perimeter equation

and solve for  $a = \frac{499-2h}{2}$

Then reformulate the area  $H = h \times a = \frac{499h}{2} - h^2$  which turns out to be a quadratic Parabola:



Compute the vertex  $\frac{499}{4}$  and then plug the vertex into the area which will compute the maximum area.