# 4.

4. Since the fences enclose a rectangular plot without one side, two sides have length b and one side has length a:

$a+b+b=1176 \implies a=1176-2b$

the area:

$area=a\times b=(l-2b)\,b= 1176\,b - 2\,b^2$

Note that the equation is for parabola. Now solve for the vertex:

$vertex= (294\ m\ ,\ 172872\ m^2\ )$

Square the unit for vertex's vertical coordinate since it is a quadratic.