## 3.

3. There are 3 sides to fence, two sides with length b and one side with length a:

$a + b + b = 4387 \implies a = 4387 - 2b$

Now find the area:

$\text{area} = a \times b = (l - 2b)b = 4387\,b - 2\,b^2$

Notice the Parabolic function, find the vertex:

$\text{vertex} = (\frac{4387}{4}$ meters $, \frac{19\,245\,769}{8}$ meters$^2$ )

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