3.

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

$a + b + b = 4722 \implies a = 4722 - 2b$

the area:

$area = a \times b = (l - 2b) b = 4722\, b - 2\, b^2$

Note that the formula is for parabola. Now compute the vertex:

$vertex = (\frac{2361}{2}\ m\ ,\ \frac{5\,574\,321}{2}\ m^2\ )$

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