1.

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

$a + b + b = 4944 \implies a = 4944 - 2b$

Now find the area:

$area = a \times b = (l - 2b)b = 4944\,b - 2\,b^2$

Notice the Parabolic function, find the vertex:

$vertex = (1236\ m\ ,\ 3\,055\,392\ m^2\ )$

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