2.

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

$a + b + b = 1998 \implies a = 1998 - 2b$

the area:

$area = a \times b = (l - 2b) b = 1998\, b - 2\, b^2$

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

$vertex = (\frac{999}{2} \text{ yd}, \frac{998\,001}{2} \text{ yd}^2)$

<mark>Square</mark> the unit for vertex's vertical coordinate since it is a quadratic.