

4.

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

$$a + b + b = 3316 \implies a = 3316 - 2b$$

the area:

$$\text{area} = a \times b = (1 - 2b) b = 3316 b - 2 b^2$$

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

$$\text{vertex} = (829 \text{ yd} , 1374482 \text{ yd}^2 )$$

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