Hostile brothers in a triangle

Solve the following optimization problem

Find the locations of N brothers in a triangle in a way that the minimum distance between each pair of brothers is maximum

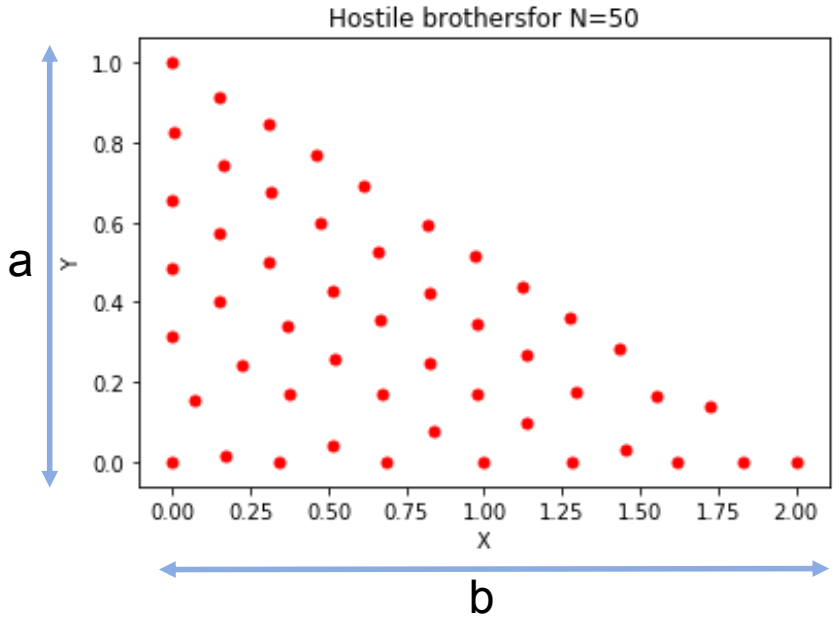
$$\max_{x_i, y_i} \quad r$$

$$(x_i - x_j)^2 + (y_i - y_j)^2 \geq r^2$$

$$0 \leq x_i \leq b$$

$$0 \leq y_i \leq a$$

$$-\frac{a}{b} x_i + a \geq y_i$$



Ex22