

Let us write some maths. If  $\triangle ABC$  has circumradius  $R$ , then the law of sines states that

$$\frac{a}{\sin \alpha} = \frac{b}{\sin \beta} = \frac{c}{\sin \gamma} = 2R.$$

The Euclidean distance between the points  $(x_1, y_1)$  and  $(x_2, y_2)$  is given by  $\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$ .