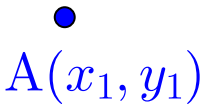
아폴로니우스의 원
(Circle of Apollonius)

Circle of Apollonius

Start End

Circle of Apollonius

Start End



Circle of Apollonius

Start End

Circle of Apollonius

Start End

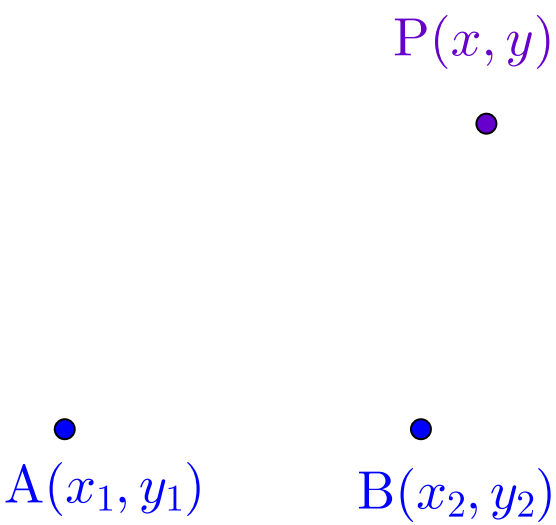
$$\overline{\mathrm{AP}} : \overline{\mathrm{BP}} = 1 : r$$

$\mathrm{A}(x_1, y_1)$ $\mathrm{B}(x_2, y_2)$

Circle of Apollonius

Start End

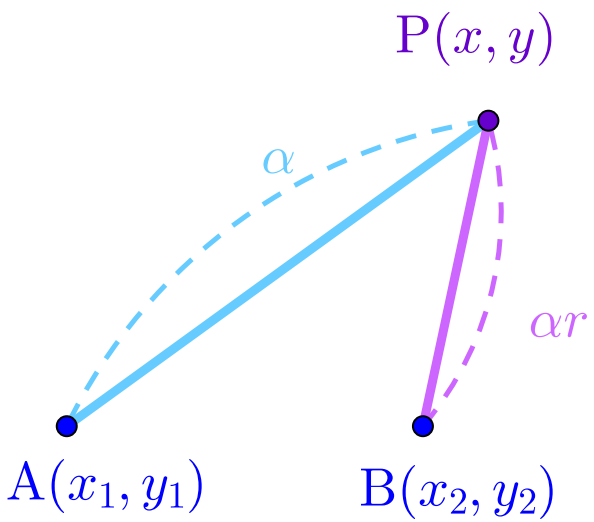
$\overline{\mathrm{AP}} : \overline{\mathrm{BP}} = 1 : r$



Circle of Apollonius

Start End

$$\overline{\mathrm{AP}} : \overline{\mathrm{BP}} = 1 : r$$

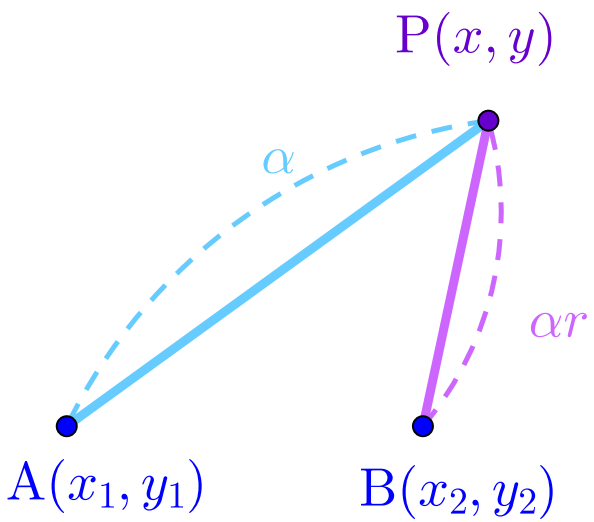


Circle of Apollonius

Start End

$$\overline{\mathrm{AP}} : \overline{\mathrm{BP}} = 1 : r$$

$$\overline{\mathrm{BP}} = r\overline{\mathrm{AP}}$$

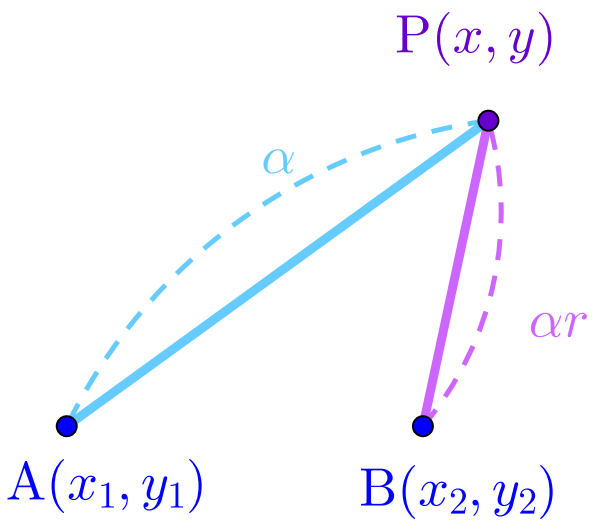


Circle of Apollonius

Start End

$$\overline{\mathrm{AP}} : \overline{\mathrm{BP}} = 1 : r$$

$$(x - x_2)^2 + (y - y_2)^2 = r^2(x - x_1)^2 + r^2(y - y_1)^2$$

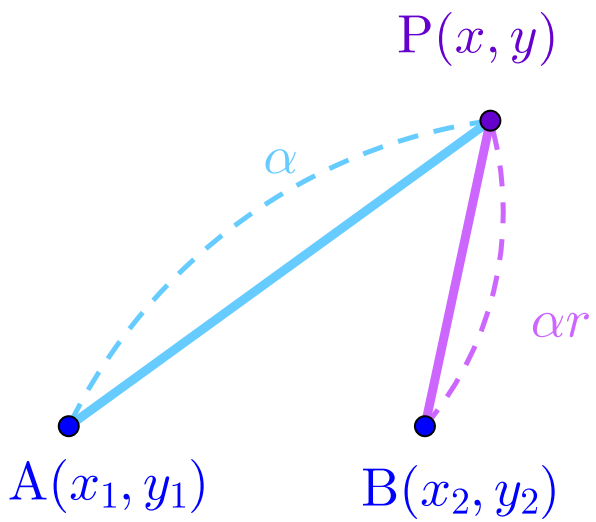


Circle of Apollonius

Start End

$$\overline{\mathrm{AP}} : \overline{\mathrm{BP}} = 1 : r$$

$$x^2 + y^2 - 2\frac{x_2 - x_1 r^2}{1 - r^2}x - 2\frac{y_2 - y_1 r^2}{1 - r^2}y + \frac{x_2^2 + y_2^2 - (x_1^2 + y_1^2)r^2}{1 - r^2} = 0$$

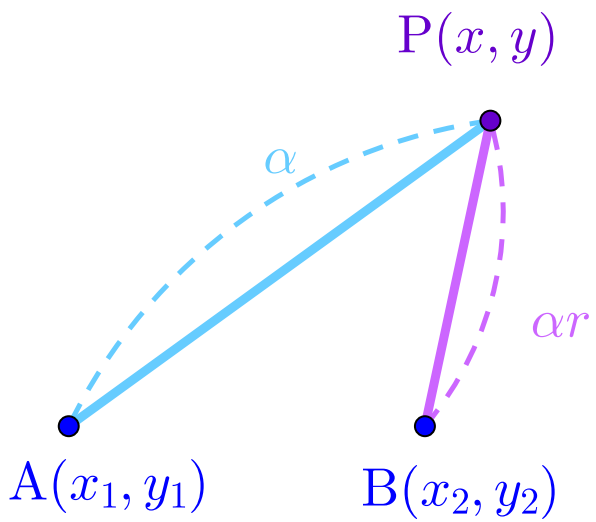


Circle of Apollonius

Start End

$$\overline{\mathrm{AP}} : \overline{\mathrm{BP}} = 1 : r$$

$$\left(x - \frac{x_2 - x_1 r^2}{1 - r^2}\right)^2 + \left(y - \frac{y_2 - y_1 r^2}{1 - r^2}\right)^2 = \frac{\left\{(x_1 - x_2)^2 + (y_1 - y_2)^2\right\} r^2}{(1 - r^2)^2}$$

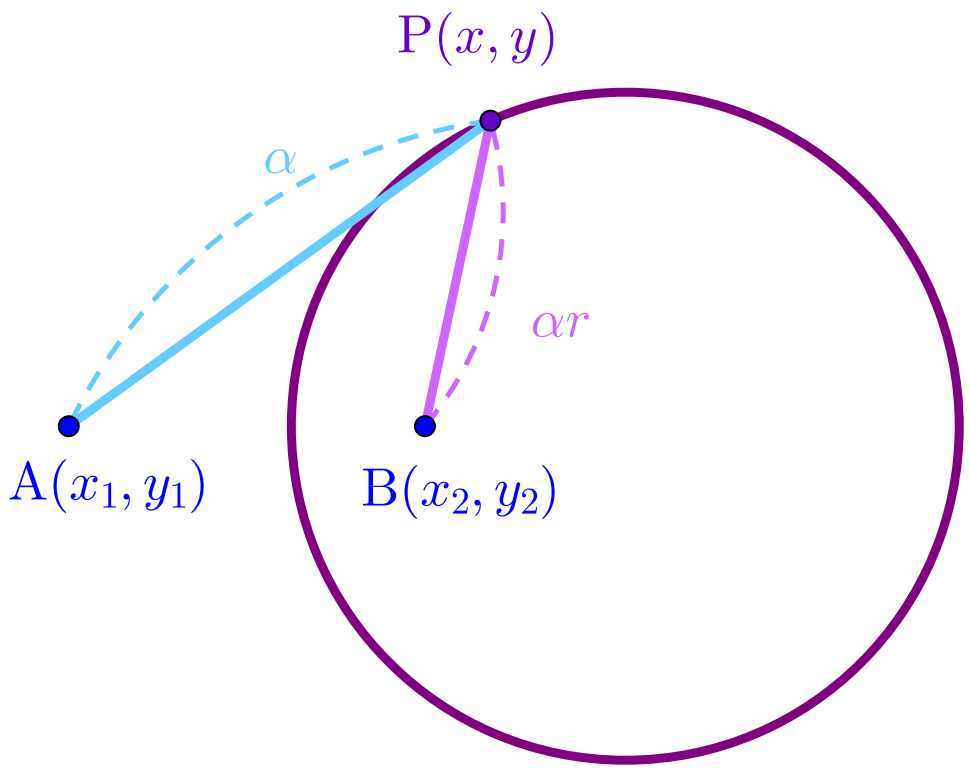


Circle of Apollonius

Start End

$$\overline{\mathrm{AP}} : \overline{\mathrm{BP}} = 1 : r$$

$$\left(x - \frac{x_2 - x_1 r^2}{1 - r^2}\right)^2 + \left(y - \frac{y_2 - y_1 r^2}{1 - r^2}\right)^2 = \frac{\left\{(x_1 - x_2)^2 + (y_1 - y_2)^2\right\} r^2}{(1 - r^2)^2}$$



Github:
https://min7014.github.io/math20210915001.html

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