

Converted to polars

(1.5)

$$\theta = \cos^{-1}\left(\frac{x}{r}\right) \text{ or } \tan^{-1}\left(\frac{y}{x}\right)$$

$$r^2 = x^2 + y^2$$

$$\phi = \tan^{-1}\left(\frac{y}{1-x}\right)$$

$$r_2^2 = (1-x)^2 + y^2$$