Polar Coordinates

"Convert from Polar → Rectangular Coordinates"

Convert the rectangular coordinate to polar form (r, θ).

$$(x, y) = (3,\ 3\sqrt{3})$$

DRAG-AND-DROP PIECES

3 $3\sqrt{3}$ $\sqrt{3}$ 6 π/3

3 $3\sqrt{3}$ 6 $\sqrt{3}$ π/3

Step 1: Write formulas

- $r = \sqrt{x^2 + y^2}$
- $\theta = \tan^{-1}\left(\frac{y}{x}\right)$

Step 2: Substitute values

- $r = \sqrt{___^2 + ___^2}$
- $\theta = \tan^{-1}\left(\frac{___}{___}\right)$

Step 3: Evaluate

- $r = ___$
- $\theta = ___$

Final Answer:

$(r, \theta) = (___,\ ___)$

LIVEWORKSHEETS