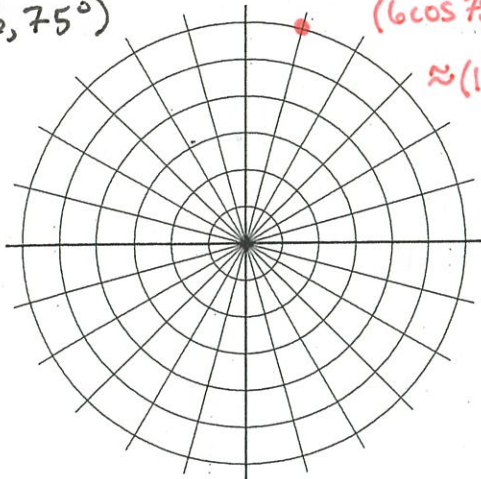


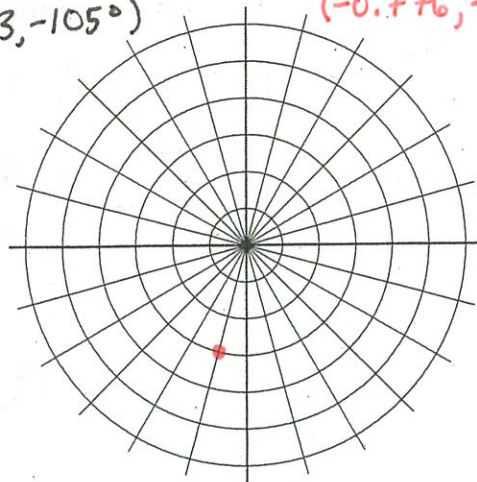
Graph the points and convert to rectangular (x,y) coordinates.

$(6, 75^\circ)$



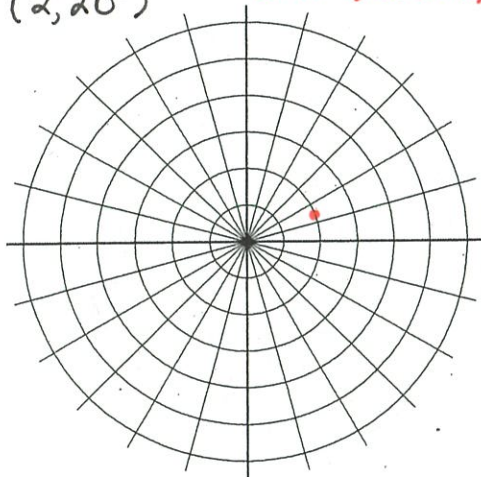
$(6 \cos 75^\circ, 6 \sin 75^\circ)$
 $\approx (1.553, 5.796)$

$(3, -105^\circ)$



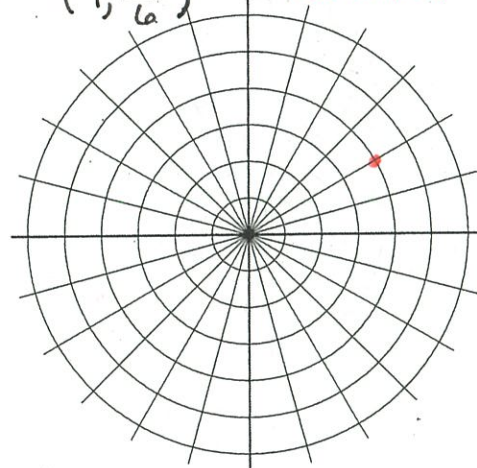
$(-0.776, -2.898)$

$(2, 20^\circ)$



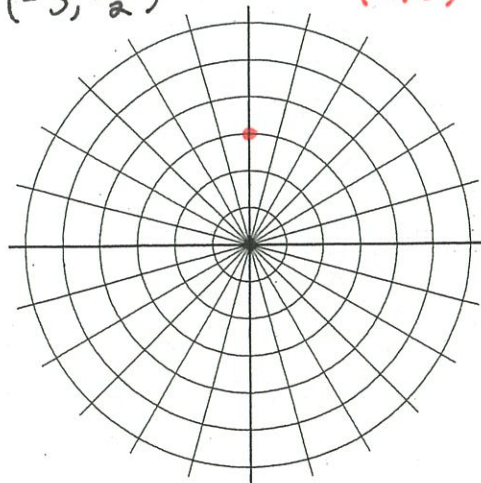
$(1.879, 0.684)$

$(4, \frac{\pi}{6})$



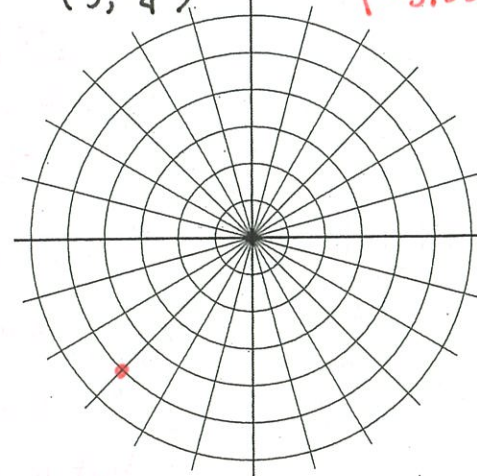
$(3.464, 2)$

$(-3, \frac{3\pi}{2})$



$(0, 3)$

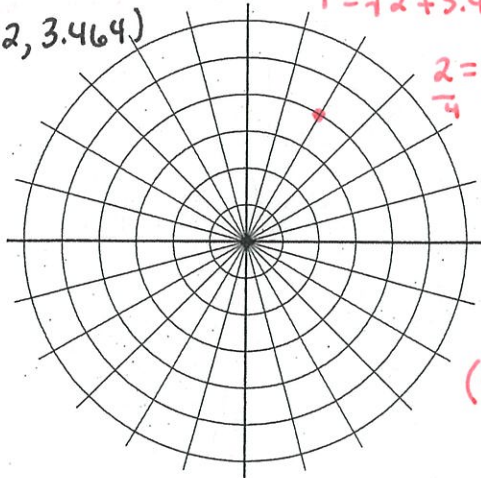
$(5, \frac{5\pi}{4})$



$(-3.536, 3.536)$

Convert to polar (r, θ) coordinates and graph the points.

$(2, 3.464)$



$$r = \sqrt{2^2 + 3.464^2} \approx 4$$

$$\frac{2}{4} = \frac{4 \cos \theta}{4}$$

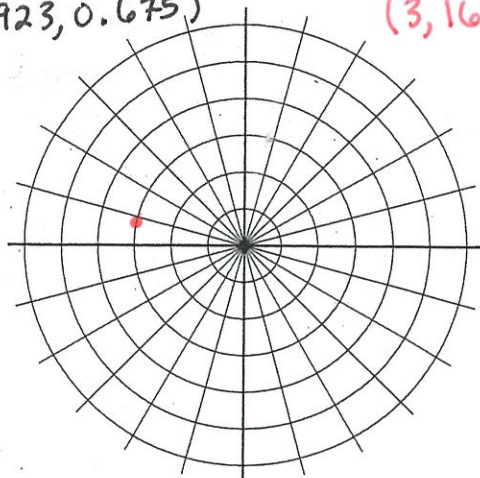
$$\frac{1}{2} = \cos \theta$$

$$\theta = \cos^{-1}\left(\frac{1}{2}\right)$$

$$\theta = 60^\circ$$

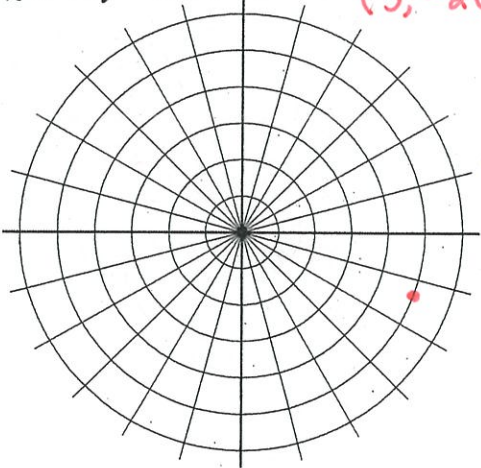
$(4, 60^\circ)$

$(-2.923, 0.675)$



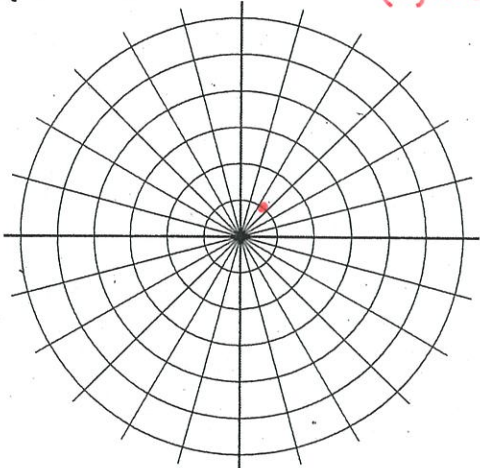
$(3, 167^\circ)$

$(4.698, -1.710)$



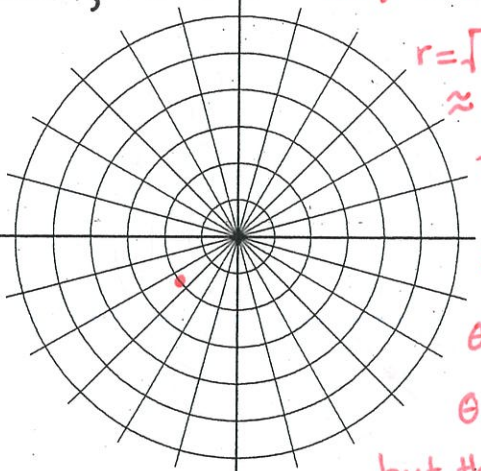
$(5, -20^\circ)$

$(0.602, 0.799)$



$(1, 53^\circ)$

$(-1.597, -1.204)$



$(2, -143^\circ)$

$$r = \sqrt{(-1.597)^2 + (-1.204)^2}$$

$$\approx 2$$

$$\frac{-1.597}{2} = \frac{2 \cos \theta}{2}$$

$$\cos \theta = \frac{-1.597}{2}$$

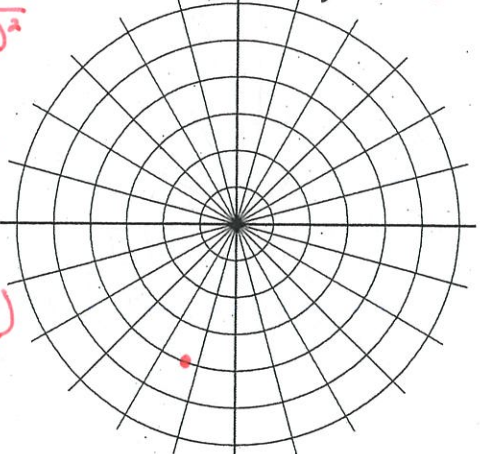
$$\theta = \cos^{-1}\left(\frac{-1.597}{2}\right)$$

$$\theta = 143^\circ$$

but the point is in
Quadrant III!

must be -143° , which
has the same cos as 143°

$(-1.368, -3.759)$



$(4, -110^\circ)$