

Rectangular coordinates: (6, y), polar coordinates (r, 22°).

We know that  $x = r \cos(\alpha)$  so

$$6 = r * \cos(22^\circ), r = 6 / \cos(22^\circ) = 6.47$$

For y we have:

$$y = r * \sin(\alpha) = 6.47 * \sin(22^\circ) = 2.42$$

So we get

rectangular coordinates: (6, 2.42),

polar coordinates: (6.47, 22°).