

Exercise 1 Find the unit vector $\hat{\mathbf{u}}$ in the first quadrant of \mathbb{R}^2 that makes an angle of $5\pi/18$ radians with the x -axis.

$$\hat{\mathbf{u}} = \left\langle \cos\left(\frac{5\pi}{18}\right), \sin\left(\frac{5\pi}{18}\right) \right\rangle$$
