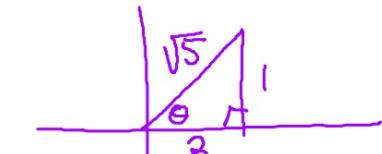


Find the exact value of the expression by drawing a picture and using the Pythagorean Theorem

$$1. \cos\left(\sin^{-1}\frac{1}{\sqrt{5}}\right) = \frac{2}{\sqrt{5}}$$

$$\sin^{-1}\left(\frac{1}{\sqrt{5}}\right) = \theta$$

$$\sin \theta = \frac{1}{\sqrt{5}}$$



$$l^2 + b^2 = \sqrt{5}^2$$

$$1 + b^2 = 5$$

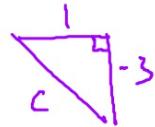
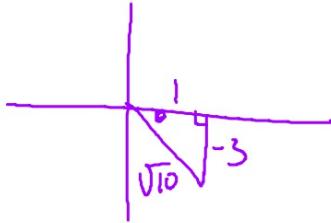
$$b^2 = 4$$

$$b = 2$$

$$2. \sin(\tan^{-1}(-3)) = \frac{-3}{\sqrt{10}}$$

$$\tan^{-1}(-3) = \theta$$

$$\tan \theta = -3$$



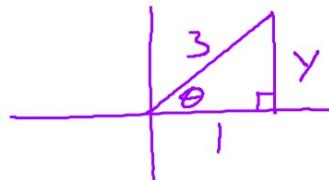
$$1^2 + (-3)^2 = c^2$$

$$1 + 9 = c^2$$

$$10 = c^2$$

$$c = \sqrt{10}$$

$$3. \tan\left(\cos^{-1}\frac{1}{3}\right) = \sqrt{8}$$



$$1^2 + y^2 = 3^2$$

$$y^2 = 8$$

$$y = \sqrt{8}$$