Exercise 208

For the following exercises, evaluate the functions. Give the exact value.

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

Solution

The inverse cosine gives an angle between 0 and π.

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

$$\cos x = -\frac{\sqrt{2}}{2}$$

The value of x that satisfies this equation is $3\pi/4$.