

For inverse functions...

$$f^{-1}(f(x)) = x \text{ for } x \text{ in the domain of } f(x) \text{ and } f(f^{-1}(x)) = x \text{ for } x \text{ in the domain of } f^{-1}(x)$$

For cosine and inverse cosine function...

$$\cos^{-1}(\cos x) = x \quad \text{given } x \text{ is in the domain of } \cos x \quad \text{Domain: } 0 \leq x \leq \pi$$

$$\cos(\cos^{-1} x) = x \quad \text{given } x \text{ is in the domain of } \cos^{-1} x \quad \text{Domain: } -1 \leq x \leq 1$$

$$\cos^{-1}(\cos x) = x \quad \text{Domain: } 0 \leq x \leq \pi$$

$$\cos(\cos^{-1} x) = x \quad \text{Domain: } -1 \leq x \leq 1$$

Evaluate the following:

$$\cos^{-1}\left(\cos \frac{\pi}{6}\right)$$

$$\cos^{-1}\left(\cos \frac{2\pi}{3}\right)$$

$$\cos^{-1}(\cos \pi)$$

$$\cos^{-1}(\cos x) = x \quad \text{Domain: } 0 \leq x \leq \pi$$

$$\cos(\cos^{-1} x) = x \quad \text{Domain: } -1 \leq x \leq 1$$

Evaluate the following:

$$\cos^{-1}\left(\cos \frac{5\pi}{4}\right)$$

$$\cos^{-1}(\cos x) = x \quad \text{Domain: } 0 \leq x \leq \pi$$

$$\cos(\cos^{-1} x) = x \quad \text{Domain: } -1 \leq x \leq 1$$

Evaluate the following:

$$\cos^{-1}\left(\cos -\frac{\pi}{6}\right)$$

$$\cos^{-1}(\cos x) = x \quad \text{Domain: } 0 \leq x \leq \pi$$

$$\cos(\cos^{-1} x) = x \quad \text{Domain: } -1 \leq x \leq 1$$

Evaluate the following:

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

$$\cos(\cos^{-1} \frac{\sqrt{3}}{2})$$

$$\cos(\cos^{-1} -1)$$

$$\cos^{-1}(\cos x) = x \quad \text{Domain: } 0 \leq x \leq \pi$$

$$\cos(\cos^{-1} x) = x \quad \text{Domain: } -1 \leq x \leq 1$$

Evaluate the following:

$$\cos(\cos^{-1} 3.5)$$

$$\cos(\cos^{-1} -2)$$

For cosine and inverse cosine function...

$$\cos^{-1}(\cos x) = x \quad \text{given } x \text{ is in the domain of } \cos x \quad \text{Domain: } 0 \leq x \leq \pi$$

$$\cos(\cos^{-1} x) = x \quad \text{given } x \text{ is in the domain of } \cos^{-1} x \quad \text{Domain: } -1 \leq x \leq 1$$