

x	$y = \cos(x)$	x	$y = \cos^{-1}(x)$
0	1	1	0
$\pi/6$	$\sqrt{3}/2$	$\sqrt{3}/2$	$\pi/6$
$\pi/4$	$\sqrt{2}/2$	$\sqrt{2}/2$	$\pi/4$
$\pi/2$	0	0	$\pi/2$
$3\pi/4$	$-\sqrt{2}/2$	$-\sqrt{2}/2$	$3\pi/4$
$5\pi/6$	$-\sqrt{3}/2$	$-\sqrt{3}/2$	$5\pi/6$
π	-1	-1	π

$$\cos^{-1}\left(\underbrace{-\frac{\sqrt{3}}{2}}_{\#}\right) = \underbrace{\frac{5\pi}{6}}_{\#}$$

angle in $[0, \pi]$
whose cosine = #.

Graphs:

