

39. If $\arccos(\cos x) = 0$ and $0 \leq x \leq \frac{\pi}{2}$, then x could equal

(A) 0

(B) $\frac{\pi}{6}$

(C) $\frac{\pi}{4}$

(D) $\frac{\pi}{3}$

(E) $\frac{\pi}{2}$

$$\cos x = 1$$

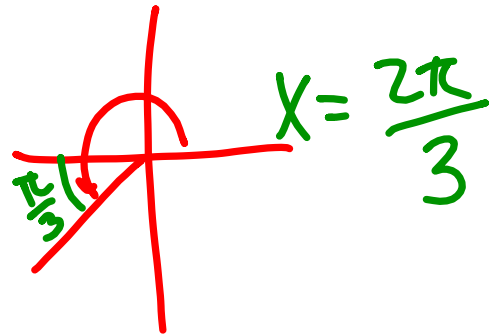
$$\cos^{-1}(\cos x) = 0$$

$$x = 0$$

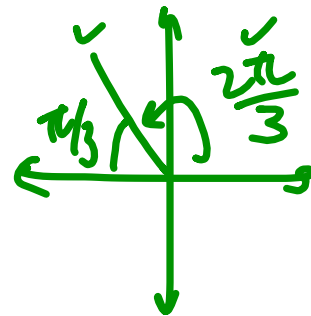
$$\cos^{-1} \cos \left(\frac{4\pi}{3} \right) = x \quad \text{Find } x.$$

$$= -\cos \frac{\pi}{3}$$

$$= -\frac{1}{2}$$



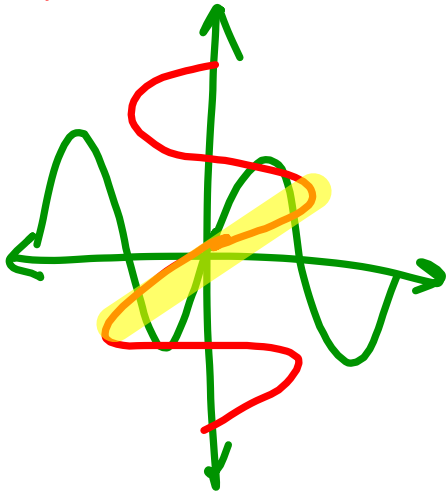
$$\cos^{-1} \left(-\frac{1}{2} \right) = \frac{2\pi}{3}$$



$$0 \leq \cos^{-1} x \leq \pi$$

$$y = \sin x$$

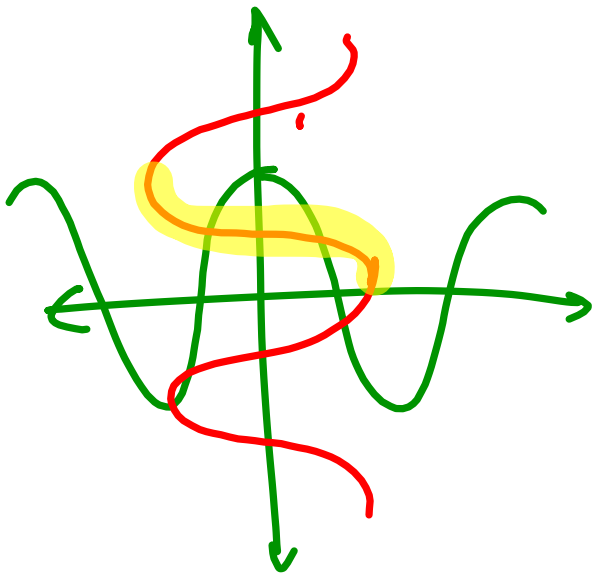
$$y = \sin^{-1} x \quad -\frac{\pi}{2} \leq y \leq \frac{\pi}{2}$$



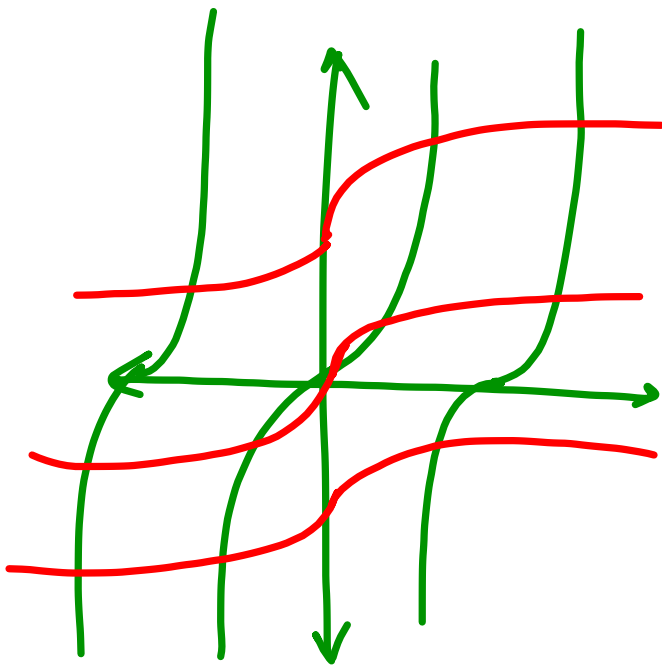
$$y = \cos x$$

$$y = \cos^{-1} x$$

$$0 \leq y \leq \pi$$



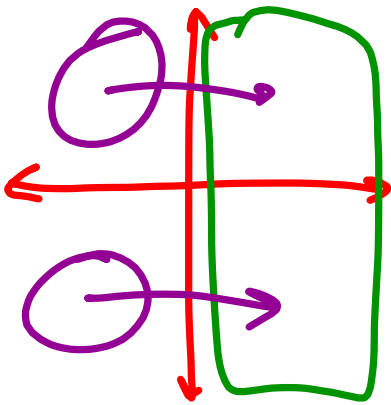
$$y = \tan x$$



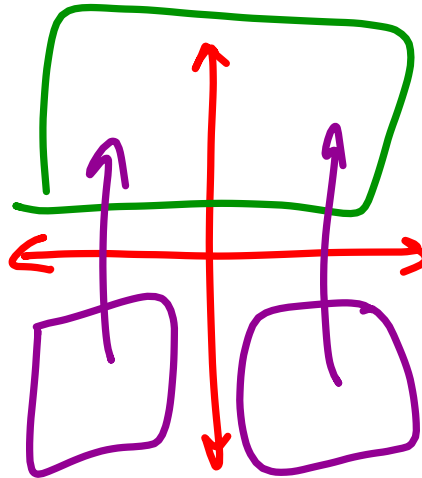
$$y = \tan^{-1} x$$

$$-\frac{\pi}{2} < y < \frac{\pi}{2}$$

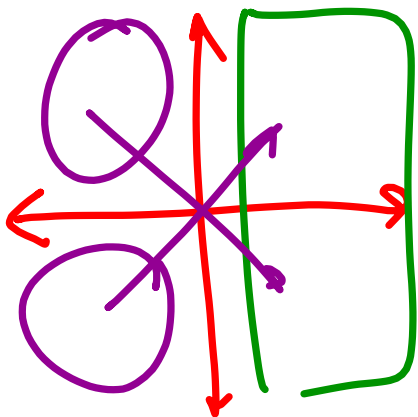
$\sin x$
 $\sin^{-1} x$



$\cos x$
 $\cos^{-1} x$



$\tan x$
 $\tan^{-1} x$



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

$$\tan^{-1}\left(\tan\left(\frac{7\pi}{6}\right)\right) = -\frac{\pi}{6}$$