

6.  $f(x) = \sin 2x \quad \left[-\frac{\pi}{a}, \frac{\pi}{b}\right]$

$$f(a) = f(-\pi) = \sin 2(-\pi) = \sin(-2\pi) = -\sin 2\pi = 0$$

$$f(b) = f(\pi) = \sin 2(\pi) = 0$$

①  $f'(x) = \cos(2x) \cdot \frac{d}{dx}(2x)$   
 $= 2 \cos(2x)$

②  $2 \cos(2x) = 0$   
 $\cos(2x) = 0$

$$\cos \frac{\pi}{2} = 0$$

$$2x = \frac{\pi}{2}$$

$$\frac{1}{2} \cdot 2x = \frac{\pi}{2} \cdot \frac{1}{2}$$

$$x = \frac{\pi}{4}$$

$$\cos \frac{3\pi}{2} = 0$$

$$2x = \frac{3\pi}{2}$$

$$x = \frac{3\pi}{4}$$

$$\cos \frac{\pi}{2} - 2\pi = 0$$

$$\cos \frac{-3\pi}{2} = 0$$

$$2x = \frac{-3\pi}{2}$$

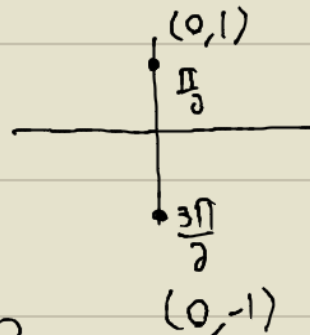
$$x = \frac{-3\pi}{4}$$

$$\cos \frac{3\pi}{2} - 2\pi = 0$$

$$\cos \frac{-\pi}{2} = 0$$

$$2x = \frac{-\pi}{2}$$

$$x = \frac{-\pi}{4}$$



$$\cos \frac{\pi}{2} + 2\pi = 0$$

$$\cos \frac{5\pi}{2} = 0$$

$$2x = \frac{5\pi}{2}$$

$$x = \frac{5\pi}{4} = 1\frac{1}{4}\pi$$

