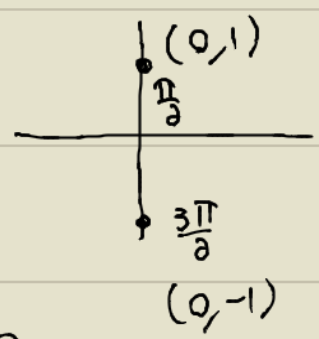


4.  $f(x) = \sin \frac{x}{2}$

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

②  $\frac{1}{2} \cos \frac{x}{2} = 0$   
 $2 \cdot \frac{1}{2} \cos \frac{x}{2} = 2(0)$   
 $\cos \frac{x}{2} = 0$



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

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

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

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

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

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

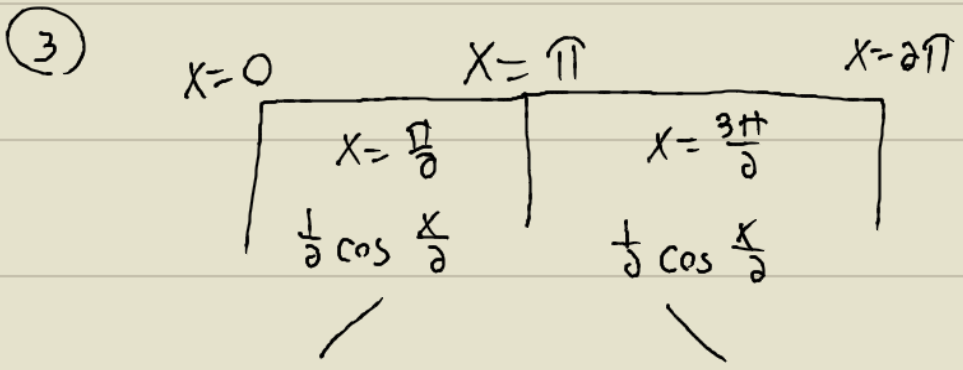
X

X

$2 \cdot \frac{x}{2} = 2\left(\frac{\pi}{2}\right)$

~~$x = 3\pi$~~

$x = \pi$



INC  $(0, \pi)$   
 DEC  $(\pi, 2\pi)$