

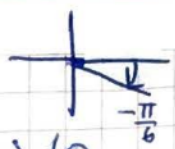
Sec 4.2 pg 300 #13-35 add

#13)  $t = \frac{\pi}{4}$

Corresponds to  $(\frac{\sqrt{2}}{2}, \frac{\sqrt{2}}{2})$

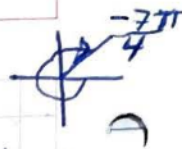
#15)  $t = -\frac{\pi}{6}$

Corresponds to  $(\frac{\sqrt{3}}{2}, -\frac{1}{2})$



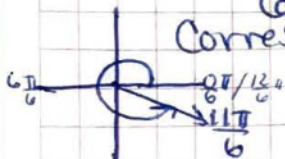
#17)  $t = -\frac{7}{4}\pi$

Corresponds to  $(\frac{\sqrt{2}}{2}, \frac{\sqrt{2}}{2})$



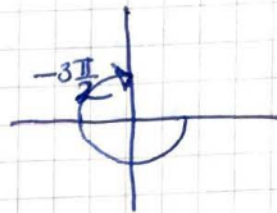
#19)  $t = \frac{11\pi}{6}$

Corresponds to  $(\frac{\sqrt{3}}{2}, -\frac{1}{2})$

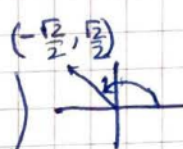


#21)  $t = -\frac{3\pi}{2}$

Corresponds to  $(0, 1)$



#23)  $t = \frac{3\pi}{4} \rightarrow (-\frac{\sqrt{2}}{2}, \frac{\sqrt{2}}{2})$



$\sin \frac{3\pi}{4} = \frac{\sqrt{2}}{2}$

$\sin \theta = y$

$\cos \frac{3\pi}{4} = -\frac{\sqrt{2}}{2}$

$\cos \theta = x$

$\tan \frac{3\pi}{4} = \frac{y}{x} = \frac{\sqrt{2}}{2} \cdot \frac{-2}{\sqrt{2}} = -1$

Tan  $\frac{y}{x}$

$-\frac{\sqrt{2}}{2}$   $\frac{\pi}{2}$  (0,1)

$\csc \frac{3\pi}{4} = \frac{1}{y} = \frac{1}{\frac{\sqrt{2}}{2}} = 1 \cdot \frac{2}{\sqrt{2}} = \sqrt{2}$

$\sec \frac{3\pi}{4} = \frac{1}{x} = \frac{1}{-\frac{\sqrt{2}}{2}} = 1 \cdot \frac{-2}{\sqrt{2}} = -\sqrt{2}$

$\cot \frac{3\pi}{4} = \frac{x}{y} = \frac{-\frac{\sqrt{2}}{2}}{\frac{\sqrt{2}}{2}} = -\frac{\sqrt{2}}{2} \cdot \frac{2}{\sqrt{2}} = -1$

#25)  $t = \frac{\pi}{2}$

$\sin \frac{\pi}{2} = y = 1$

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

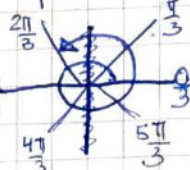
$\tan \frac{\pi}{2} = \frac{y}{x} = \frac{1}{0} = \text{undef.}$

$\sec \frac{\pi}{2} = \frac{1}{x} = \text{undef.}$

$\cot \frac{\pi}{2} = \frac{x}{y} = \frac{0}{1} = 0$

#31)  $\cos \frac{8\pi}{3}$

$\Rightarrow \cos \frac{2\pi}{3} = -\frac{1}{2}$



#27)  $t = -\frac{\pi}{3}$

$\sin^{-\frac{\pi}{3}} = y = -\frac{\sqrt{3}}{2}$

$\csc^{-\frac{\pi}{3}} = \frac{1}{y} = \frac{1}{-\frac{\sqrt{3}}{2}} = -\frac{2\sqrt{3}}{3}$

$\cos^{-\frac{\pi}{3}} = x = \frac{1}{2}$

$\sec^{-\frac{\pi}{3}} = \frac{1}{x} = \frac{1}{\frac{1}{2}} = 2$

$\tan^{-\frac{\pi}{3}} = \frac{y}{x} = \frac{-\frac{\sqrt{3}}{2}}{\frac{1}{2}} = -\frac{\sqrt{3}}{2} \cdot \frac{2}{1} = -\sqrt{3}$



$-\frac{\pi}{3}$   $(\frac{1}{2}, -\frac{\sqrt{3}}{2})$

#29)  $\sin 5\pi$

$\Rightarrow \sin \pi = 0$

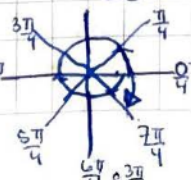


#33)  $\cos -3\pi$   
 $\Rightarrow \cos \pi = -1$



#35)  $\sin(-\frac{9\pi}{4})$

$\Rightarrow \sin(\frac{7\pi}{4}) = -\frac{\sqrt{2}}{2}$



$\cot^{-\frac{\pi}{3}} = \frac{x}{y} = \frac{\frac{1}{2}}{-\frac{\sqrt{3}}{2}} = -\frac{1}{\sqrt{3}} = -\frac{\sqrt{3}}{3}$

$\frac{1}{2} \cdot \frac{2}{-\sqrt{3}} = -\frac{1}{\sqrt{3}} = -\frac{\sqrt{3}}{3}$

