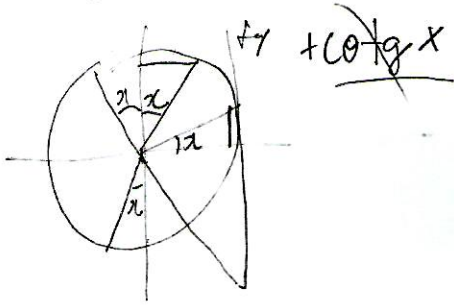
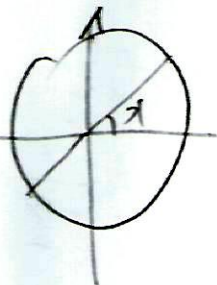


$$c) \sin(\pi+x) + \cos(\frac{\pi}{2}-x) + \tan(\frac{\pi}{2}+x) + \cot(\frac{3\pi}{2}-x) =$$

$$= -\sin x + \cos x - \cot x + \tan x$$



$$= 0$$

$$\cot(\pi-x) = -\cot x$$

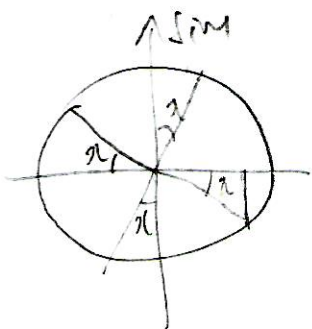
$$b) \operatorname{cosec}(\frac{\pi}{2}+x) = \frac{1}{\sin(\frac{\pi}{2}+x)} = \frac{1}{\cos x} = \sec x$$

$$\sec(\frac{\pi}{2}+x) = \frac{1}{\cos(\frac{\pi}{2}+x)} = \frac{1}{-\sin x} = -\operatorname{cosec} x$$

$$\cot(\frac{\pi}{2}+x) = -\tan x = -\frac{1}{\cot x}$$

$$d) \sin(\frac{\pi}{2}-x) + \sin(\pi-x) + \sin(\frac{3\pi}{2}-x) + \sin(2\pi-x) =$$

$$= \cos x + \sin x + (-\cos x) + (-\sin x) = 0$$



$$c) \operatorname{cosec}(\pi+x) = \frac{1}{\sin(\pi+x)} = \frac{1}{-\sin x} = -\operatorname{cosec} x$$

$$\sec(\pi+x) = \frac{1}{\cos(\pi+x)} = \frac{1}{-\cos x} = -\sec x$$

$$\cot(\pi+x) = \cot x$$

$$4. a) \operatorname{cosec}(\pi-x) = \frac{1}{\sin(\pi-x)} = \frac{1}{\sin x} = \operatorname{cosec} x$$

$$= \frac{1}{\sin x} = \operatorname{cosec} x$$

$$\sec(\pi-x) = \frac{1}{\cos(\pi-x)} = \frac{1}{-\cos x} = -\sec x$$

$$= \frac{1}{-\cos x} = -\sec x$$

$$d) \operatorname{cosec}(\frac{3\pi}{2}+x) = \frac{1}{\sin(\frac{3\pi}{2}+x)} = \frac{1}{-\cos x} = -\sec x$$

$$\sec(\frac{3\pi}{2}+x) = \frac{1}{\cos(\frac{3\pi}{2}+x)} = \frac{1}{\sin x} = \operatorname{cosec} x$$

$$\cot(\frac{3\pi}{2}+x) = -\tan x = -\frac{1}{\cot x}$$