

1, 3, 11-23 odd

math

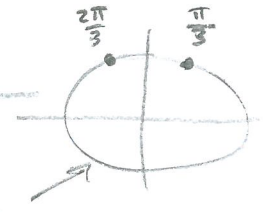
$$3. \tan^2\left(\frac{\pi x}{6}\right) - 3 = 0 \quad \text{x.int}$$

$$\tan^2\left(\frac{\pi x}{6}\right) = 3$$

$$\tan\left(\frac{\pi x}{6}\right) = \pm\sqrt{3}$$

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

$$\frac{\pi x}{6} = \tan^{-1} \pm \sqrt{3}$$



$$\frac{6}{\pi} \left[\frac{\pi x}{6} = \frac{\pi}{3} + \pi n \right] \quad \frac{6}{\pi} \left[\frac{\pi x}{6} = \frac{2\pi}{3} + \pi n \right]$$

$$x = 2 + 6n \quad x = 4 + 6n$$

$$n=0 \quad \boxed{x=2} \quad n=-1 \quad \boxed{x=-2}$$

$$13. \sqrt{3} \csc x - 2 = 0$$

$$\sqrt{3} \csc x = 2$$

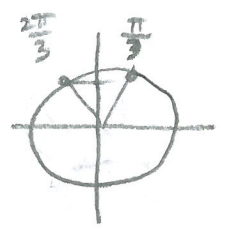
$$\csc x = \frac{2}{\sqrt{3}}$$

$$\csc x = \frac{2}{\sqrt{3}}$$

$$\sin x = \frac{\sqrt{3}}{2}$$

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

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



2πn

$$\boxed{x = \frac{\pi}{3} + 2\pi n \quad x = \frac{2\pi}{3} + 2\pi n}$$

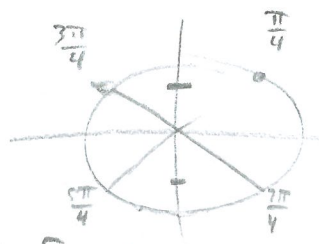
$$17. 2 \sin^2 2x = 1$$

$$\sin^2 2x = \frac{1}{2}$$

$$\sin 2x = \pm \frac{\sqrt{2}}{2}$$

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

$$2x = \sin^{-1} \pm \frac{\sqrt{2}}{2} \quad \text{4 answers}$$



$$\frac{2x}{2} = \frac{\pi}{4} + 2\pi n, \quad \frac{2x}{2} = \frac{3\pi}{4} + 2\pi n, \quad \frac{2x}{2} = \frac{5\pi}{4} + 2\pi n, \quad \frac{2x}{2} = \frac{7\pi}{4} + 2\pi n$$

ab