

$$1) \Lambda \cos^2 - \frac{\sin^2}{\cos^2} = 1 \rightarrow \Lambda \cos^2 - \sin^2 = \cos^2 \rightarrow \Lambda \cos^2 = 1 \rightarrow \cos^2 = \frac{1}{\Lambda}$$

$$\cos = \pm \frac{1}{\sqrt{\Lambda}} \quad \text{نقطه ۲}$$

$$2) \cos 2x = \frac{1 + \cos^2 x}{r} \rightarrow \Delta \sin^2 x + r \cos^2 \left(\frac{2x}{r} \right) = 0$$

$$r \cos^2 \frac{x}{r} - 1 = \cos^2 x \quad \text{معادله منفرجه}$$

$$\sin x = 0 \rightarrow -\pi/0/\pi \quad \left\{ \begin{array}{l} \cos^2 \left(\frac{2x}{r} \right) = 0 \rightarrow \frac{2x}{r} = 2k\pi \pm \frac{\pi}{r} \rightarrow x = \frac{rk\pi}{r} \pm \frac{\pi}{r} \\ 2k\pi \pm \frac{\pi}{r} \end{array} \right.$$

$$3) r \sin^2 + 1 = \cos 2x$$

$$r \sin^2 - \cos^2 + 1 = 0 \rightarrow (\sin^2 + 1) (r \sin^2 - \cos^2 + 1) = 0$$

$$r \sin^2 - \cos^2 + 1 = 0$$

$$\sin = -1 \rightarrow x = \frac{3\pi}{2}$$

$$(r \sin - 1) r = 0 \rightarrow \sin x = \frac{1}{r} \rightarrow x = \frac{\pi}{4} \text{ و } \frac{3\pi}{4}$$

$$5) \frac{1}{r \cos^2} = \frac{-1}{-\sin^2} \quad \sin^2 x + \cos^2 x = 0$$

$$r \sin^2 x \cos^2 x + \cos^2 x = 0 \rightarrow \cos^2 x (r \sin^2 x + 1) = 0$$

$$x = \frac{\Delta \pi}{12} - \frac{\pi}{12} = \frac{\pi}{12} \quad \tan \frac{\pi}{12} = \sqrt{3} \quad \frac{\Delta \pi}{12} \text{ و } \frac{\pi}{12} = x \quad \leftarrow \frac{-1}{r}$$

$$a) \frac{\sqrt{r}}{r} \cos x = \frac{\sqrt{r}}{r} \sin x = \frac{\sqrt{r}}{r} (\cos - \sin) = \frac{1}{\sqrt{r}}$$

$$\sin^2 + \cos^2 - r \sin \cos = \frac{r}{r} \rightarrow 1 - \sin^2 x = \frac{r}{r} \rightarrow \sin^2 x = \frac{1}{r}$$

$$m (\cos - \sin) - \sqrt{r} \sin^2 x = \sqrt{r} \rightarrow m \frac{\sqrt{r}}{r} = \sqrt{r} \rightarrow m = r$$

$$4) \sin \left(x + \frac{\pi}{4} \right) = 1 \rightarrow \sin \left(x + \frac{\pi}{4} \right) = \left(\pm 1 \right) \rightarrow rk\pi \pm \frac{\pi}{r}$$

$$x = rk\pi \pm \frac{\pi}{r} - \frac{\pi}{4}$$

$$v) \frac{\sin x + \frac{\sin \pi}{r}}{\cos \frac{\pi}{r}} \times \cos = \sqrt{r} \rightarrow \sin \left(x + \frac{\pi}{r} \right) = \sqrt{r} \cos \frac{\pi}{r} \rightarrow x + \frac{\pi}{r} = rk\pi + \frac{\pi}{r}$$

$$x = -\frac{\pi}{r} \text{ و } \frac{\Delta \pi}{12} \text{ و } \frac{2rk\pi}{12} \rightarrow \frac{rk\pi}{6}$$

$$x + \frac{\pi}{r} = rk\pi + \pi - \frac{\pi}{r}$$

$$1) \sin 2x - \cos 2x = 1$$

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

$$2x = k\pi - \frac{\pi}{4} \rightarrow x = k\pi - \frac{\pi}{8}$$

$$2x = k\pi + \frac{\pi}{4} \rightarrow x = k\pi + \frac{\pi}{8}$$

$$[0, 2\pi] \rightarrow 2\pi$$

$$\frac{\pi}{8} + \frac{11\pi}{8} + \frac{19\pi}{8} + \frac{27\pi}{8} = 2\pi$$

$$9) (\cos^2 x) (\cos^2 x) (\cos^2 x) = \frac{1}{n}$$

$$\cos^2 x \times \cos^2 x \times \cos^2 x = \pm \frac{1}{n}$$

$$\frac{\sin x}{\sin x} \rightarrow \frac{1}{n} \sin nx = \pm \frac{1}{n} \sin x$$

$$\sin nx = \pm \sin x = \sin(\pm x)$$

$$+x \rightarrow x = \frac{k\pi}{n}$$

$$\rightarrow x = \frac{k\pi + \pi}{n}$$

$$-x \rightarrow x = \frac{k\pi}{n}$$

$$\rightarrow x = \frac{k\pi + \pi}{n}$$

$$max = \frac{n\pi}{n}$$

$$10) \tan \mu n = \frac{1}{\tan n}$$

$$\tan\left(\frac{\pi}{2} - n\right) = \cot n$$

$$\tan \mu n = \cot n$$

$$\mu n = k\pi + \frac{\pi}{2} - n$$

$$n = k\frac{\pi}{\mu} + \frac{\pi}{\mu}$$

$$\frac{9\pi}{n} + \frac{11\pi}{n} + \frac{13\pi}{n} + \frac{15\pi}{n} = 2\pi$$