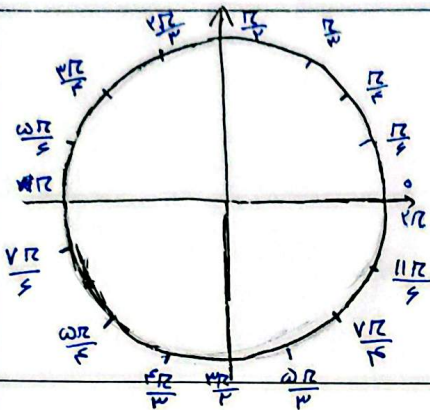




$$1) \tan \frac{\pi}{6} = \frac{\sqrt{3}}{3}$$

$$2) \tan \frac{\pi}{4} = 1$$

$$3) \tan \frac{\pi}{3} = \sqrt{3}$$

$$4) \tan \frac{\pi}{2} = \text{تعیین نشده}$$

$$5) \tan \frac{2\pi}{3} = -\sqrt{3}$$

$$6) \tan \frac{3\pi}{4} = -1$$

$$7) \tan \frac{5\pi}{6} = -\frac{\sqrt{3}}{3}$$

$$8) \tan \pi = 0$$

$$9) \tan \frac{7\pi}{6} = \frac{\sqrt{3}}{3}$$

$$10) \tan \frac{5\pi}{4} = 1$$

$$11) \tan \frac{3\pi}{2} = \sqrt{3}$$

$$12) \tan \frac{7\pi}{4} = 0$$

$$13) \tan \frac{5\pi}{3} = -\sqrt{3}$$

$$14) \tan \frac{11\pi}{6} = -1$$

$$15) \tan \frac{13\pi}{6} = -\frac{\sqrt{3}}{3}$$

$$16) \tan 0 = \tan 2\pi = 0$$

$$\text{الف) } \sin \frac{\pi}{6} + \cos \pi + 2 \tan \frac{5\pi}{6} \rightarrow \frac{1}{2} + (-1) + 2 \times (-1) = -2/2$$

$$\text{ب) } -\cos \frac{5\pi}{6} + \sin \frac{2\pi}{3} - 3 \sin \frac{\pi}{6} \rightarrow -(-\frac{\sqrt{3}}{2}) + \frac{\sqrt{3}}{2} - 3(\frac{1}{2}) = \frac{\sqrt{3}}{2}$$

$$\text{ج) } \cot \frac{5\pi}{6} + 3 \cot \frac{\pi}{3} - 2 \tan \frac{5\pi}{6} \rightarrow -\frac{\sqrt{3}}{3} + 3 \times \frac{\sqrt{3}}{3} - 2 \times \frac{\sqrt{3}}{3} = \frac{\sqrt{3}}{3}$$

$$\text{د) } \cos(\sin \pi) + \sin(\pi \cos \frac{\pi}{6}) = 1$$

$\underbrace{\cos(0)}_1 + \sin(\pi \times \frac{1}{2}) = 1$
 $\sin \frac{\pi}{2} = 1$

$$a^2 + 4a = 2a + a + 2$$

$$a^2 + a - 2 = 0$$

$$(a+2)(a-1) = 0$$

$$a = -2 \rightarrow \text{غیر صحیح}$$

$$\boxed{a = 1}$$

$$f(1) \rightarrow 1 + 4 = 5$$

$$-3 < x < -1, |x+1| \geq 2$$

$$x \geq 1 \rightarrow 2 \leq x+1$$

$$x \leq -3 \leftarrow x+1 < -2$$

$$2(-3)^2 - b = a + 2(-3)$$

$$18 - b = a - 6$$

$$\boxed{18 - b = a - 6}$$

$$\text{الف) } y = \frac{1}{x^2(x-4)} \quad D = \mathbb{R} - \{4, 0\}$$

$$\text{ب) } y = \frac{1}{2x^3 + 4x^2 + 2x + 4} \rightarrow 2x(x^2+1) + 4(x^2+1) \rightarrow (x^2+1)(2x+4)$$

$$\hookrightarrow D = \mathbb{R} - \{-2\}$$

4

Y

14

9

1.

