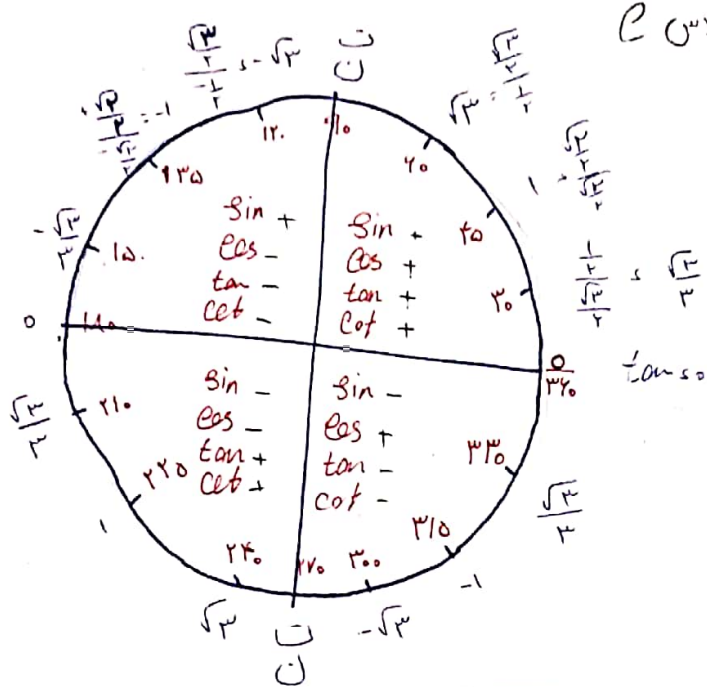




$$\text{الف) } \frac{1}{r} - 1 - 2 = -2,5$$

$$\text{ج) } -\frac{\sqrt{3}}{3} + 3\left(\frac{\sqrt{3}}{3}\right) - 2\left(-\frac{\sqrt{3}}{3}\right) = 4\frac{\sqrt{3}}{3}$$

$$\text{د) } -\frac{\sqrt{3}}{2} + \frac{\sqrt{3}}{2} - 3\left(\frac{\sqrt{3}}{2}\right) = -\frac{3\sqrt{3}}{2}$$

$$\text{و) } 1 + 1 = 2$$

$$1) \text{ } a \text{ متناهی} = a^2 + 2a = \underbrace{2a + a + 2}_{2a} \Rightarrow a^2 + a - 2 \leq 0$$

$$(a-1)(a+2) \leq 0$$

$$a = 1 \quad \boxed{a = -2} \times \rightarrow a > 0$$

$$2) \text{ متناهی عدد (1) } \rightarrow \frac{1+4}{(1)^2 + 4(1)} \leq 0$$

در هر یک از مساوات

$$2x^2 + 4x \rightarrow |n+1| \geq 2 \rightarrow \begin{cases} n+1 \geq 2 \\ n > 1 \end{cases} \quad \begin{cases} n+1 \leq -2 \\ n \leq -3 \end{cases}$$

$$a + 2n \rightarrow -3 \leq n \leq -1$$

برای که در هر دو
نقطه که -3

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

$$18 - b = a - 6$$

$$a + b = 24$$

$$\text{الف) } n^3 - 4n^2 \neq 0 \quad n^2(n-4) \neq 0 \quad Df = \mathbb{R} - \{0, 4\}$$

$$\text{ب) } 1) \text{ متناهی از 1) } = 2 \left(\frac{n^3 + 2n^2 + n + 2}{n^2(n+2)} \right) \neq 0 \rightarrow 2 = 2 \left(\frac{n^2(n+2) + (n+2)}{n^2(n+2)} \right)$$

$$\rightarrow \text{متناهی از 1) } = 2 \left(\frac{(n+2)(n^2+1)}{n^2(n+2)} \right) \Rightarrow \text{باید } Df = \mathbb{R} - \{0, -2\}$$

$$n \leq -2$$

$$n^2 \neq -1 \rightarrow \text{متناهی}$$

$$4) \sqrt{(x^2-1)} + \sqrt{x-2} \rightarrow x \geq 2 \quad \left\{ \cap \rightarrow Df: [2, +\infty) \right. \\ \left. \sqrt{(x-1)(x+1)} \geq 0 \rightarrow \frac{-1}{1-1} \right. \\ \left. \cup (-\infty, -1] \cup [1, +\infty) \right.$$

$$5) \sqrt{4-3x} \rightarrow 4-3x \geq 0 \quad x \leq 2 \quad \left\{ \cap \rightarrow \right. \\ \sqrt{4x-3} \rightarrow 4x-3 \geq 0 \quad x \geq \frac{3}{4} \quad \left. \rightarrow \left(\frac{3}{4}, 2 \right] \right.$$

$$1) \text{ } y = 4(x) - a = 0 \quad a = 12 \quad \frac{b}{a} = \frac{4}{12} = \frac{1}{3} \\ b = 4(x) = 0 \quad b = 4$$

$$2) \sqrt{\frac{(x-3)(x+2)}{(x-4)(x-9)}} \quad \begin{array}{c} 3 \quad -2 \\ + \quad - \quad + \quad - \quad + \\ 0 \quad 0 \end{array} \quad Df: (-\infty, -2] \cup [3, 4) \cup [9, +\infty)$$

$$3) \frac{x^2 - 2x^2 - 2x + 4}{x^2 - x - 4} \quad \frac{x^2 + 2x^2 - 2x - 4}{x^2 + x - 4} \quad \frac{x+1}{x^2 + x - 4}$$

$$\sqrt{\frac{(x^2 - x - 4)}{(x^2 + x - 4)}} \Rightarrow \sqrt{\frac{(x+2)(x-3)}{(x+3)(x-2)}} \Rightarrow \begin{array}{c} -3 \quad -2 \quad 2 \quad 3 \\ + \quad - \quad + \quad - \quad + \\ 0 \quad 0 \end{array}$$

$$\rightarrow Df: (-\infty, -3) \cup [-2, 2) \cup [3, +\infty)$$

$$4) \sqrt{x[x]-x} \geq 0 \quad x[x] \geq x \quad [x] \geq 1 \quad Df = [1, +\infty)$$

$$5) \sqrt{x[x]-2} \geq 0 \quad [x] \geq 2, 0 \quad Df: [2, +\infty)$$

$$\sqrt{\frac{x+1}{|x-3|}} \quad x \geq -1 \quad \begin{array}{c} -1 \quad 3 \\ + \quad - \quad + \\ 0 \quad 0 \end{array}$$

$$\sqrt{\frac{4-x}{(x+2)^2}} \quad \begin{array}{c} -2 \quad 4 \\ + \quad - \quad + \\ 0 \quad 0 \end{array} \\ Df = (-2, -1] \cup [3, 4]$$

$$6) \sqrt{[x]-x} \geq 0 \quad [x] \geq x \quad Df: [1, +\infty)$$

$$\sqrt{x-[x]} \geq 0 \quad x \geq [x] \quad Df: (-\infty, 1]$$

$$\rightarrow Df = \emptyset$$