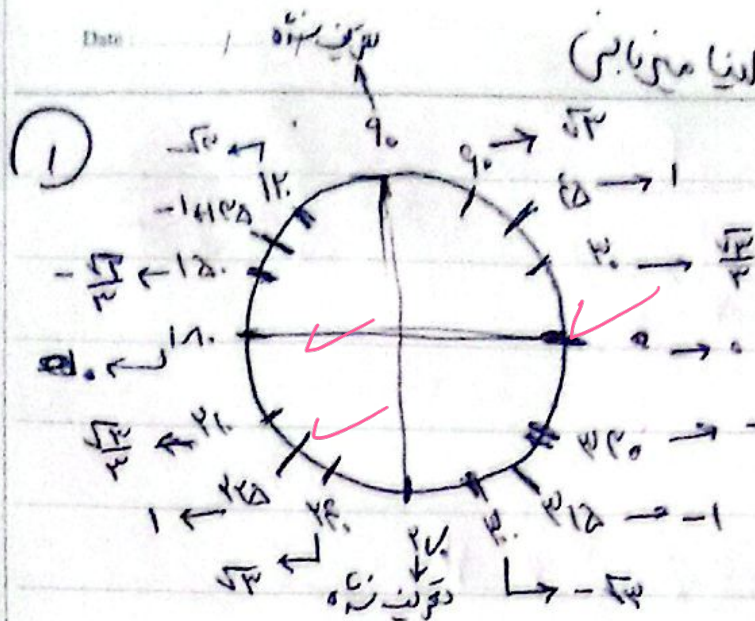




⑦) $\frac{1}{2} + (-1) + 2x - 1 = -2 + \frac{1}{2} = -\frac{3}{2}$

ب) $-(-\frac{\sqrt{3}}{2}) + \frac{\sqrt{3}}{2} - 3(-\frac{\sqrt{3}}{2}) = 2\frac{\sqrt{3}}{2} + 3\frac{\sqrt{3}}{2} = 5\frac{\sqrt{3}}{2}$

ج) $-\frac{\sqrt{3}}{2} + 3x + \frac{\sqrt{3}}{2} - 2(-\frac{\sqrt{3}}{2}) = 2\frac{\sqrt{3}}{2} + 2\frac{\sqrt{3}}{2} = 4\frac{\sqrt{3}}{2}$

د) $\cos(0) + \sin(2\frac{1}{2}) = 1 + 1 = 2$

⑧) $a^2 + \epsilon a = 2a + a + 2 \rightarrow a^2 + a - 2 = 0 \rightarrow (a+2)(a-1) = 0$
 $x > 1 \quad n + \epsilon n \xrightarrow{x=1} \boxed{1 + \epsilon = 2} \quad a = 1 \leftarrow a > 0$

⑨) $|x+1| > 2 \rightarrow x+1 > 2 \rightarrow x > 1 \quad x+1 < -2 \rightarrow x < -3$
 $\begin{cases} x^2 - b & x > 1 \quad x^2 - b \\ a + 2x & -3 < x < -1 \end{cases} \xrightarrow{x=-3} 11 - b = a - 4$
 $\rightarrow \boxed{a+b = 11+4 = 15}$

ب)
$$\frac{x^3 - 2x^2 - 5x + 4}{x^3 + 2x^2 - 5x - 4} \rightarrow \frac{(x-1)(x^2 - x - 4)}{(x+1)(x^2 - x - 4)}$$

بجای (n-1) بر (n+1) بگذاریم

$$\begin{array}{r} x^3 - 2x^2 - 5x + 4 \\ -x^3 + 2x^2 - 5x + 4 \\ \hline -10x + 8 \end{array}$$

$$\frac{-10x + 8}{x^2 - x - 4}$$

$$\frac{-10x + 8}{x^2 - x - 4} \rightarrow \frac{-10x + 8}{(x-1)(x+1)(x-2)}$$

$$\frac{x^3 + 2x^2 - 5x - 4}{x^3 + 2x^2 - 5x - 4} \rightarrow \frac{(x+1)(x^2 - x - 4)}{(x+1)(x^2 - x - 4)}$$

$$\frac{x^2 - x - 4}{x^2 - x - 4} \rightarrow \frac{x^2 - x - 4}{(x+1)(x+2)(x-2)}$$

$$D_f = (-\infty, -2) \cup [-1, 1) \cup (1, 2) \cup [2, +\infty)$$

9) $f(x) - \varepsilon > 0 \rightarrow [x] > 2 \rightarrow x > 2 \rightarrow [2, +\infty)$

ب) $f(x) - \varepsilon > 0 \rightarrow [x] > \frac{5}{2} \rightarrow [x] > 2.5 \rightarrow x > 2.5 \rightarrow [2.5, +\infty)$

10) الف)
$$\sqrt{\frac{x+1}{|x-1|}} + \sqrt{\frac{4-x}{x^2+1}} \rightarrow x < 4$$

$$\rightarrow x > -1$$

$$x \neq 1$$

$$\rightarrow [-1, 4] - \{1\}$$

آزمین من ضمیمه شده بودم که یکی سوال را از ادول استوری حل کند و هیچ کس نوشته بود آفرین بهت 
 Date :

$$[n] \leq 4, [n] \leq 2 \xrightarrow{\text{عذر ممکن}} D_f = \emptyset$$

(ب)