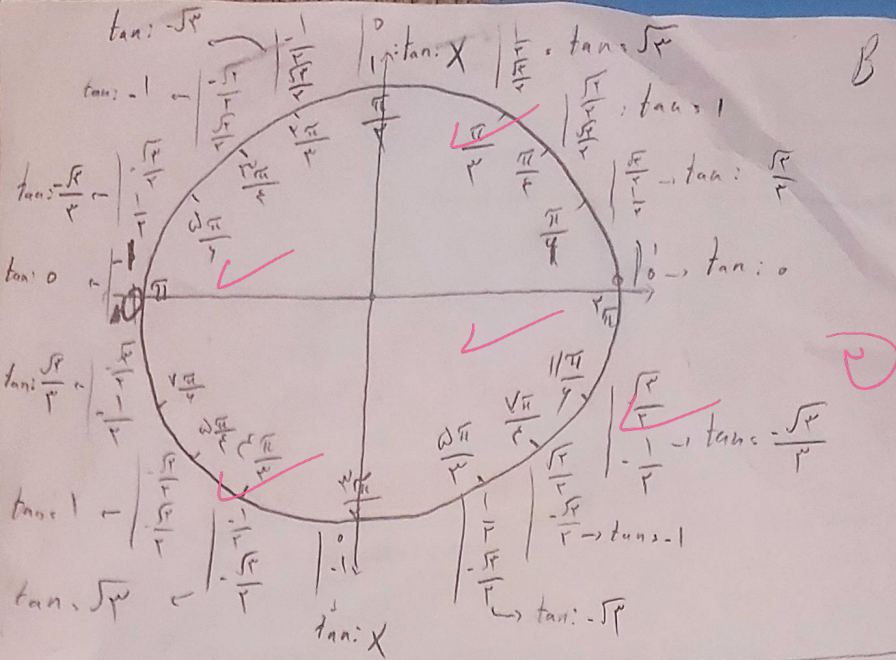


سری شفا علی بابا زخم سران

۱۹،۷۵



الف) $\frac{1}{r} + (-1) + (-2) = -\frac{2}{r}$

ب) $\frac{\sqrt{3}}{r} + \frac{\sqrt{3}}{r} + \frac{3\sqrt{3}}{r} = \frac{5\sqrt{3}}{r}$

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

د) $\cos(0) + \sin\left(\frac{\pi}{2}\right) = 2$

$a^2 + 2a = 2a + 1 \Rightarrow a^2 + a - 1 = 0$

$(a+2)(a-1) \begin{cases} a=1 \checkmark \\ a=-2 \times \end{cases}$

$f_{(1)} = 1 + 1 = 2$

اگر $f(x) = \ln - b = a - 1 \Rightarrow \boxed{2f(a+b)}$
 $-1 + 1 = 2 \Rightarrow 2 \ln - b = a + 1$

الف) $\sin(x-1) \Rightarrow D_f: \mathbb{R} - \{0, 1\}$

ب) $x^2(2x+1) + (2x+1) = (2x+1)(x^2+1) \Rightarrow D_f: \mathbb{R} - \{-2\}$

$$\left. \begin{aligned} \text{الف)} \rightarrow \sqrt{(n+1)(n-1)} &\rightarrow \begin{cases} n \geq 1 \\ n \leq -1 \end{cases} \Rightarrow n \geq 2, D_f = [2, +\infty) \\ \sqrt{n-2} &\rightarrow n \geq 2 \end{aligned} \right\}$$

۱۵۵

صفحه آخر مطالعه شود ↓

$$\left. \begin{aligned} \text{ب)} \frac{\sqrt{4-3n}}{\sqrt{4n-3}} &\rightarrow \begin{cases} n \leq 2 \\ n \geq \frac{1}{3} \end{cases} \Rightarrow \frac{1}{3} \leq n \leq 2 \Rightarrow D_f = \left[\frac{1}{3}, 2\right] \\ &\text{مخرج نباید منفی شود} \end{aligned} \right\}$$

$$\left. \begin{aligned} 4n-a \geq 0 \Rightarrow 4n \geq a \Rightarrow n \geq \frac{a}{4} \\ b-2n \geq 0 \Rightarrow b \geq 2n \Rightarrow n \leq \frac{b}{2} \end{aligned} \right\} \Rightarrow \begin{cases} a=12 \\ b=4 \end{cases} \Rightarrow \frac{1}{3} \leq n \leq \frac{1}{2}$$

$$\text{الف)} \sqrt{\frac{(n+2)(n-2)}{(n^2-4)^2 - n^2}} = \sqrt{\frac{(n+2)(n-2)}{(n^2-n-4)(n^2-4+n)}} = \sqrt{\frac{(n+2)(n-2)}{(n+2)(n-2)(n-2)(n+3)}} = \frac{-2 \times -2}{+2 \times -2 \times -2 \times +2} = \frac{2 \times 2}{2 \times 2 \times 2 \times 2}$$

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

$$\begin{aligned} \text{ب)} \rightarrow \frac{n^2(n-2) - (n+1)(n-2)}{n^2(n+2) - (n+1)(n+2)} &= \frac{(n+2)(n-2)(n-1)}{(n+2)(n-2)(n+1)} = \frac{(n-1)}{(n+1)} \\ \Rightarrow \frac{(n-2)(n^2-4) - (n+1)(n-2)}{(n+2)(n^2-4n+2) - (n+1)(n+2)} &= \frac{(n-2)(n+1)(n+3)}{(n+2)(n-1)(n-2)} = \frac{(n+1)(n+3)}{(n+2)(n-1)} \\ \Rightarrow \frac{(n+2)(n^2-4n+2) - (n+1)(n+2)}{(n+2)(n-1)(n-2)} &= \frac{(n+2)(n-1)(n-2)}{(n+2)(n-1)(n-2)} = \frac{(n-1)(n-2)}{(n+2)(n-1)} \end{aligned}$$

$$D_f = \mathbb{R} - [-2, 2) \cup (-1, 1) \cup (2, 3)$$

$$\begin{aligned} \text{الف)} \frac{\sqrt{n+1}}{\sqrt{n-3}} &\rightarrow \begin{cases} n \geq -1 \\ n \neq 3 \end{cases} \Rightarrow D_f = [-1, 4] - \{3\} \\ \frac{\sqrt{4-n}}{\sqrt{n^2+n+1}} &\rightarrow n \leq 4 \end{aligned}$$

$$\text{ب)} \sqrt{[n]-4} \rightarrow [n] \geq 4 \Rightarrow n \geq 4$$

$$\sqrt{2-[n]} \rightarrow [n] \leq 2 \Rightarrow n \leq 3$$

$$\Rightarrow D_f = \emptyset$$

عبارت زیر را سوال باید نامتنی و عبارت صفر مخالف صفر باشد ...
(4-ب) $y = \frac{\sqrt{4-3n}}{\sqrt{4n-3}}$

$$4-3n \geq 0 \rightarrow n \leq 2$$

$$4n-3 > 0 \rightarrow n > \frac{1}{4} \xrightarrow{\cap} \frac{1}{4} < n \leq 2 \rightarrow D_f = \left(\frac{1}{4}, 2\right]$$