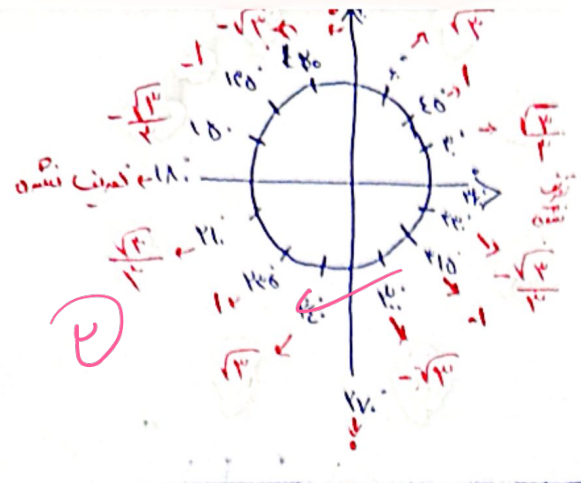


هلیا عرب

14 آفرین



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

ب) $-\cos \frac{\pi}{6} + \sin \frac{\pi}{3} - 2 \sin \frac{\pi}{6} = \frac{\sqrt{3}}{2}$
 $-\frac{\sqrt{3}}{2} + \frac{\sqrt{3}}{2} - 2 \times \frac{1}{2}$

ج) $\cos(\sin \pi) + \sin(\pi \cos \pi)$
 $1 + 1 = 2$

د) $\cot \frac{\pi}{6} + \cot \frac{\pi}{3} - 2 \tan \frac{\pi}{6}$
 $\frac{\sqrt{3}}{1} + \frac{1}{\sqrt{3}} - 2 \times \frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$

$f(x) = \begin{cases} x^2 + 4x & x \geq a \\ 2x + a + 2 & x < a \end{cases}$
 $f(1) = 5$

$x=a \rightarrow \begin{cases} a^2 + 4a = 2a + a + 2 \\ a^2 + a - 2 = 0 \\ (a+2)(a-1) \end{cases} \rightarrow \begin{cases} a = -2 \\ a = 1 \end{cases}$

$f(x) = \begin{cases} x^2 - b & |x+1| \geq 2 \\ a + 2x & -3 \leq x \leq -1 \end{cases}$
 $a=2, 11-b=a-6 \rightarrow a+b=17$

الف) $y = \frac{1}{x^3 - 4x^2}$
 $D_f = \mathbb{R} - \{0, 4\}$
 $x^3 - 4x^2 \neq 0$
 $x^2(x-4) \neq 0$
 $x \neq 0, x \neq 4$

ب) $y = \frac{1}{2x^3 + 5x^2 + 2x + 2}$
 عبارت باید تقسیم شود در صورتی که مقصود ...
 پانین صفحه ۲ بجوان

الف) $y = \sqrt{x^2 - 1} + \sqrt{x - 2}$
 $D_f = [1, +\infty)$
 $(x+1)(x-1) \leftarrow \frac{-1}{+1-1+}$
 $x=1, x=1$
 $x \leq 1$

ب) $\frac{\sqrt{4-3x}}{\sqrt{6x-3}}$
 $4-3x \geq 0 \Rightarrow 3x \leq 4 \Rightarrow x \leq \frac{4}{3}$
 $6x-3 \geq 0 \Rightarrow 6x \geq 3 \Rightarrow x \geq \frac{1}{2}$

$D_f = (\frac{1}{2}, \frac{4}{3}]$

$$y = \sqrt{4a - a} + \sqrt{b - 4a}$$

$$\frac{4}{12} = \frac{1}{3}$$

(v)

$$4(x) - a = 0$$

$$12 = a$$

$$b - 4 = 0$$

$$b = 4$$

(v)

ا) $y = \sqrt{\frac{a^2 - a - 6}{a^2 + 4a + 4}}$ $\rightarrow (a-3)(a+2) = 0$ $\rightarrow a = 3$ $\rightarrow a = -2$

$(a-3)(a+2) = 0$ $\rightarrow a = 3$ $\rightarrow a = -2$

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$D_f = (-2, 3) \cup (3, \infty)$

ب) $y = \sqrt{\frac{a^2 - 4a^2 - 5a + 6}{a^2 + 4a - 5}}$ $\frac{(a-1)(a-2)(a+3)}{(a-2)(a+1)(a+3)}$

$\frac{(a-1)(a-2)(a+3)}{(a-2)(a+1)(a+3)}$

$\frac{-2}{-1} \cdot \frac{-1}{1} \cdot \frac{1}{1} = 2$ $\rightarrow D_f = (-2, -1) \cup [-1, 2) \cup (2, \infty)$

ا) $y = \sqrt{4[a] - 5}$ $\rightarrow 4[a] - 5 \geq 0$ $\rightarrow [a] \geq \frac{5}{4}$ $\rightarrow [a] \geq 2$ $\rightarrow D_f = [2, +\infty)$

$4[a] - 5 \geq 0$ $\rightarrow [a] \geq \frac{5}{4}$ $\rightarrow [a] \geq 2$ $\rightarrow D_f = [2, +\infty)$

$[a] \geq 2$ $\rightarrow D_f = [2, +\infty)$

ا) $y = \sqrt{\frac{a+1}{|a-2|}} + \sqrt{\frac{4-a}{a^2+4a+4}}$ $a = 4$

$\frac{a+1}{|a-2|}$ $\rightarrow a = -1$ $\rightarrow a = 2$

$\frac{4-a}{a^2+4a+4}$ $\rightarrow a = -2$ $\rightarrow a = 2$

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

ب) $y = \sqrt{[a] - 5} + \sqrt{4 - [a]}$ $\rightarrow [a] - 5 \geq 0$ $\rightarrow [a] \geq 5$ $\rightarrow [a] \geq 5$ $\rightarrow D_f = [5, +\infty)$

$[a] - 5 \geq 0$ $\rightarrow [a] \geq 5$ $\rightarrow [a] \geq 5$ $\rightarrow D_f = [5, +\infty)$

$[a] \geq 5$ $\rightarrow D_f = [5, +\infty)$

$$\text{ب-و)} y = \frac{1}{r^3 + rn^2 + r^2n + r^2} \leadsto r(n^3 + rn^2 + n + r) = 0$$

$$r[(n^3 + n) + (rn^2 + r)] = 0 \leadsto r[n(n^2 + 1) + r(n^2 + 1)] = 0$$

$$= r(n^2 + 1)(n + r) = 0 \leadsto D_f = \mathbb{R} - \{-r\}$$

سهمین min در
میان ریشه ن