

الف) $\frac{1}{r} \cdot x(1) - 2 \rightarrow 2, 5$

ع) $\frac{1}{\sqrt{3}} + \frac{2}{\sqrt{3}} + \frac{2}{\sqrt{3}} \rightarrow \frac{5}{\sqrt{3}}$

ب) $\frac{\sqrt{3}}{1} + \frac{\sqrt{3}}{1} + \frac{2\sqrt{3}}{1} \rightarrow \frac{5\sqrt{3}}{1}$

د) $\cos(1) + \sin(\frac{\pi}{4}) \rightarrow 1 + 1 = 2$

$x=a, a^2+ta=va+a+t \rightarrow a^2+a-t=0 \quad a = \frac{-1 \pm \sqrt{1+4}}{2} = \frac{-1 \pm 3}{2} = -2, 1$

$\begin{cases} x^2+tx & x \geq 1 \\ 2x+t & x \leq 1 \end{cases} \xrightarrow{x=1} 1+t=5$

$x=-3 \rightarrow rx^2-b=a+rx \rightarrow a+b=rx^2-rx \rightarrow 11+4=25$

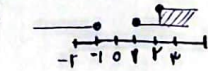
$\hookrightarrow |1-3+1|=2$

$-2 \leq x \leq 1$

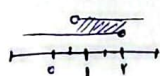
الف) $x^2-tx \neq 0 \rightarrow \frac{x^2}{x}(\frac{x-t}{x}) \neq 0 \quad R - \{0, t\}$

ب) $rx^2+tx+rx+t \neq 0 \xrightarrow{\div r} x^2+(x+t)x+t \neq 0 \quad x^2(x+t)+(x+t) \rightarrow (x+t)(x^2+1) \neq 0 \quad R - \{-t\}$

الف) $x^2-1 > 0 \rightarrow x > 1 \rightarrow x \geq 1 \quad x < -1 \rightarrow x \leq -1$
 $x-2 > 0 \rightarrow x > 2$



ب) $4-3x > 0 \rightarrow 3x < 4 \rightarrow x < \frac{4}{3}$
 $4x-3 > 0 \rightarrow 4x > 3 \rightarrow x > \frac{3}{4}$



$4x-a=0 \xrightarrow{x=r} 12-a=0 \rightarrow 12=a$
 $b-3x=0 \xrightarrow{x=r} b-4=0 \rightarrow b=4$

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

الف) $\frac{x^2-x-4}{x^2-13x^2+24} > 0 \rightarrow \frac{(x-4)(x+2)}{(x-4)(x+3)(x+2)(x-2)} > 0 \quad \frac{-r}{+} \frac{-r}{-} \frac{r}{-} \frac{r}{+}$
 $\hookrightarrow x^2=t \rightarrow t^2-13t+24 \rightarrow t=9, t=3 \xrightarrow{t=x^2} x=\pm 3, \pm 2$

$R - [t, r] - [r]$

ب) $\frac{(x^2-3)(x-2)}{(x^2-3)(x+2)} > 0 \quad \frac{-r}{+} \frac{-r}{-} \frac{r}{-} \frac{r}{+} \rightarrow R - [r, 2]$

$\hookrightarrow x^2=3 \rightarrow x=\pm\sqrt{3}$

استباه بجزیه کردی راه حل آخر صده

نورینه

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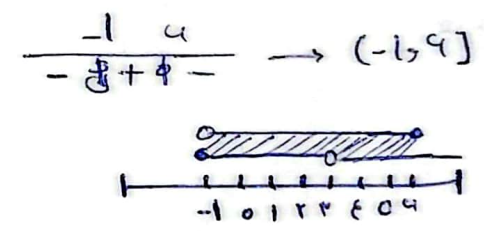
الف) $|x-2| > 0 \rightarrow |x| > 2 \rightarrow [x] > 2 \rightarrow [2, +\infty)$

د

ب) $|x-2| > 0 \rightarrow |x| > 2 \rightarrow [x] > \frac{2}{2} \rightarrow [x] > 1 \rightarrow [2, +\infty)$

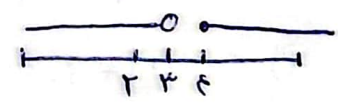
الف) $\frac{x+1}{|x-2|} > 0 \xrightarrow{\oplus} x+1 > 0 \rightarrow x > -1$
 $\hookrightarrow x \neq 2$

$\frac{4-x}{x^2+2x+2} > 0$
 $\hookrightarrow \frac{-2}{2} = -1$



$(-1, 4] - \{2\}$

ب) $|x-2| > 0 \rightarrow [x] > 2 \rightarrow [2, +\infty)$
 $2 - [x] > 0 \rightarrow [x] < 2 \rightarrow (-\infty, 2)$



$\emptyset$

تعريف نسبه

ب-۱) $y = \sqrt{\frac{n^3 - 2n^2 - 5n + 4}{n^3 + 2n^2 - 5n - 4}}$

مخرج را به صورت $(n-1)$ می‌نویسیم

$$\leadsto \frac{n^3 - 2n^2 - 5n + 4}{n^3 + 2n^2 - 5n - 4} \geq 0 \leadsto$$

مخرج را به صورت $(n+1)$ می‌نویسیم

$$\frac{(n-1)(n^2 - n - 4)}{(n+1)(n^2 + n - 4)} \geq 0 \leadsto \frac{(n-1)(n-3)(n+2)}{(n+1)(n+3)(n-2)} \geq 0$$

نقطه‌های بحرانی: $-3, -2, -1, 1, 2, 3$

علامت‌دهی: $+, -, +, -, +, -$

$$D_f = (-\infty, -3) \cup [-2, -1) \cup [1, 2) \cup [3, +\infty)$$