

$$y = \frac{x+1}{15x^2 - 16x + 11x - 10} = \frac{x+1}{15x^2 - 14x + 10} \rightarrow x^2 - 14x + 10 \rightarrow x^2 - 14x + 40$$

$$Df = \mathbb{R} - \left\{ \frac{10}{15}, \frac{4}{9}, 1 \right\} \quad (x-10)(x-4)$$

$$\frac{10}{15} \quad \frac{4}{9}$$

$$y = \frac{x+11}{15x^2 - 14x - 10} = \frac{11x^2 - 14x - 10}{(x-4)(x+1)}$$

$$Df = \mathbb{R} - \left\{ \frac{10}{15}, \frac{4}{9}, 1 \right\}$$

$$y = \frac{x+1}{x - \sqrt{15-12x}} = \frac{15-12x}{x - \sqrt{15-12x}} \rightarrow x < \frac{5}{4} \rightarrow x - \sqrt{15-12x} \neq 0$$

$$Df = (-\infty, \frac{5}{4}] - \left\{ \frac{5}{4} \right\}$$

$$x \neq \sqrt{15-12x} \rightarrow x^2 = 15-12x \rightarrow x^2 + 12x - 15 = 0 \rightarrow (x+15)(x-1) = 0$$

$$y = \frac{x+11}{x - \sqrt{15-12x}} = \frac{15x - 12x}{x - \sqrt{15-12x}} \rightarrow x > \frac{5}{4} \quad x=1 / x=-15$$

$$x - \sqrt{15-12x} \neq 0 \quad x \neq \sqrt{15-12x} \rightarrow x = \sqrt{15-12x}$$

$$x^2 = 15-12x \rightarrow x^2 + 12x - 15 = 0 \rightarrow (x-1)(x-15) = 0 \quad x=1$$

$$Df = \left[\frac{5}{4}, \infty \right) - \left\{ 1, 15 \right\}$$

$$x=15$$

$$y = \frac{\sin x}{\cos x - 1} = \frac{1}{\cos x - 1} \neq 0 \rightarrow \cos x \neq 1 \quad Df = \left[\frac{\pi}{2}, \frac{3\pi}{2} \right]$$

$$(k \in \mathbb{Z})$$

$$y = \frac{\cos x + 1}{\sin x + 1} = \frac{1}{\sin x + 1} \neq 0 \quad \sin x \neq -1 \quad x \neq \frac{3\pi}{2} + 2k\pi$$

$$Df = \left[\frac{\pi}{2}, \frac{3\pi}{2} \right] - \left\{ \frac{3\pi}{2} \right\}$$

$$y = \frac{\tan x + 1}{\cot x - 1} \rightarrow \cos x \neq 0 \quad x \neq \frac{\pi}{2} + k\pi$$

$$\cot x \neq 1 \rightarrow \cot x \neq 1 \quad x \neq k\pi + \frac{\pi}{4} \rightarrow \cot x \neq 1$$

$$Df = \mathbb{R} - \left\{ k\pi + \frac{\pi}{4}, k\pi + \frac{\pi}{2} \right\}$$

$$\tan x \neq 1$$

$$y = \frac{\sin x + 1}{\epsilon_2 \sin x - \mu} \xrightarrow{\epsilon_2 \sin x - \mu \neq 0} \sin x \neq \frac{\mu}{\epsilon_2}$$

$$Df = R - x \mid \sin x = \pm \sqrt{r}$$

$$x^p - a x + y \rightarrow$$

$$x^4 - 4x + d \leq_0 Df = (19g)$$

$$\begin{aligned} & \frac{(x-1)(x-a)}{x=1 \quad x=a} \\ & \left\{ \begin{array}{l} x^p + yx + d \end{array} \right\}_0 \\ & \frac{-y - p}{+1 - 1 +} Df = v \left[\begin{array}{c} (-\infty, -d] \cup [1, +\infty) \\ \text{not } \end{array} \right] \end{aligned}$$

$$\frac{1}{1 - \frac{1}{x}} = x$$

$$\frac{x^p - \mu x + \mu}{x - d} \quad \gamma_0 \quad \frac{(x-1)(x-\mu)}{(x-d)} \quad \gamma_0 \quad \frac{1 \quad \mu \quad d}{-1 \quad + \quad 1 \quad - \quad 1} \quad 5$$

$$D\mathcal{E}_{(-\infty, 1)} U(\mu_{\mathcal{G}})$$

$$\frac{x^{\nu-1}}{x^{\nu} - x + d} \xrightarrow{\nu \rightarrow \infty} \frac{x^{\nu-1}}{(x-1)(x-d)} \xrightarrow{\nu \rightarrow \infty} \frac{-1}{+1-1-1} = \frac{-1}{-1} = 1$$

$$y = \sqrt{\frac{x^k - kx + k}{x^{k-1}}} \rightarrow (x-1)(x-k) \\ x^{k-1} - kx + k = 1 \rightarrow x=1$$
$$Df = [0, +\infty)$$
$$\text{[1]}$$

$$Df = 12 - \{ \pm 17 \}$$

Subject

Date : Year: $x=0$ Month: $x=10$ Day:

مسئله

$$(x+3)(x-5)$$

$$y = \log(x^2 - 13x)$$

$$x > 0 \text{ و } x \neq$$

$$Df = (-\infty, 0) \cup (13, +\infty)$$

1

$$y = \log$$

$$14 - x$$

$$1x1 - 1$$

$$12 - 1 > 0$$

$$1x > 1$$

$$x - 5 > 0$$

$$x > 5$$

$$1x1 - 1$$

$$12 - 1 \neq 0$$

$$1x \neq 1$$

$$1x1 - 1$$

$$1x1 - 1$$

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$$\log \frac{(x-1)(x-5)}{x^2 - 13x + 12}$$

$$10 - x \quad 10 - x > 0 \quad x < 10$$

$$10 - x \neq 0 \quad x \neq 10 \quad (-\infty, 10) \cup (13, 10)$$

$$x = 1$$

$$y = \frac{x^2 - x}{x^2 + x}$$

$$x(x+1)$$

$$x=0$$

$$x=-1$$

	-1	0	1
$x^2 - x$	-	+	-
$x^2 + x$	+	-	+
$p(x)$	-	-	+

مسئله

$$y = \sqrt{x^2 - 11x + 12}$$

$$(x-5)(x-12)$$

$$x=5 \cap x=12$$

$$Df = (5, 12)$$

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$$y = \sqrt{\frac{x - f(x)}{f(x)}}$$

$$f(x) = 0 \rightarrow x = 19 - 1$$

$$\frac{x - f(x)}{f(x)} > 0$$

$$x - f(x) = 0$$

$$x = f(x)$$

$$x = -19$$

$$x = -19$$

$$x = -19$$

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$$x = -19$$

$$Df = (-\infty, -19)$$

$$Df = (-\infty, -19)$$

Subject

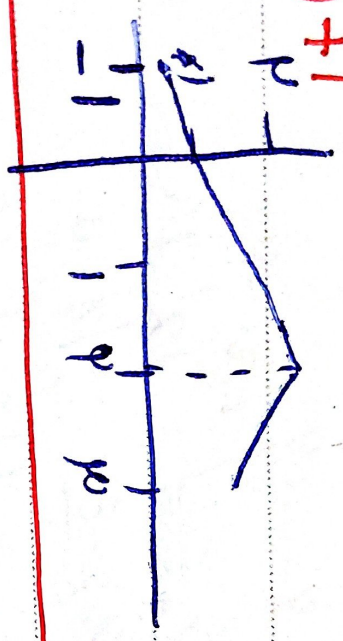
Date : Year

Month:

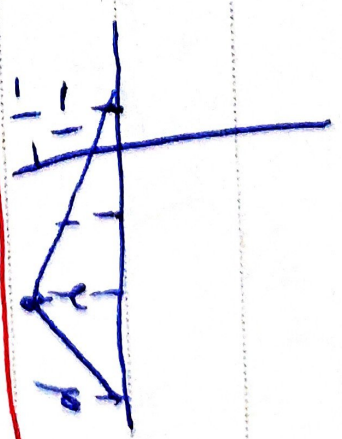
Day:

گرسن قوس

الف) $f(x) + 1$

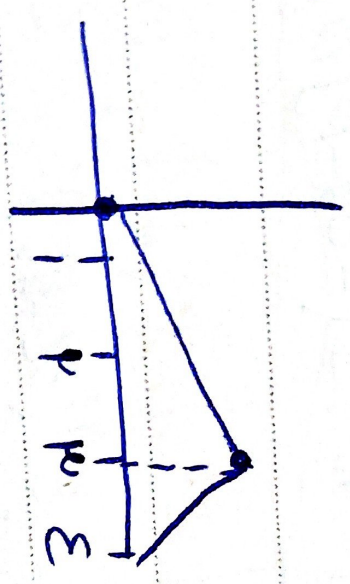


ب) $f(x)$

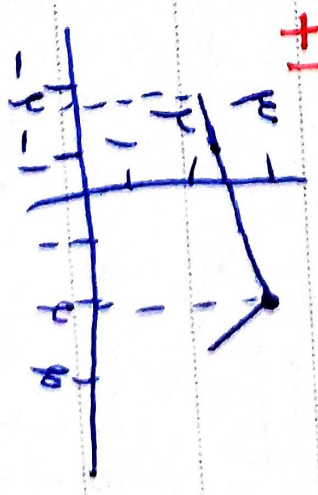


10

ج) $f(x-1)$



د) $f(x+1) + 1$



سرسن قوس

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