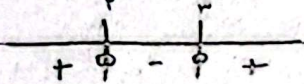


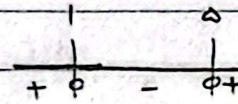
$$\text{الف) } x^2 - 5x + 6 > 0$$

$$(x-2)(x-3) > 0$$



$$(-\infty, 2) \cup (3, +\infty)$$

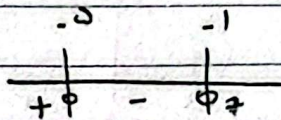
$$\text{ب) } x^2 - 4x + 5 < 0 \rightarrow (x-1)(x-5) < 0$$



$$(1, 5)$$

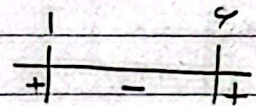
$$\text{ج) } x^2 + 4x + 5 \geq 0$$

$$(x+1)(x+5) \geq 0$$



$$(-\infty, -5] \cup [-1, +\infty)$$

$$\text{د) } x^2 - 5x + 4 \leq 0 \quad (x-1)(x-4) \leq 0$$

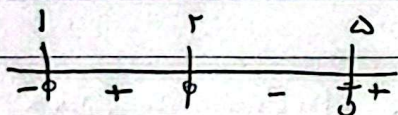


$$D_f = [1, 4]$$

$$\text{هـ) } \frac{x^2 - 3x + 2}{x-5} < 0$$

$$\frac{(x-1)(x-2)}{x-5} < 0$$

-5

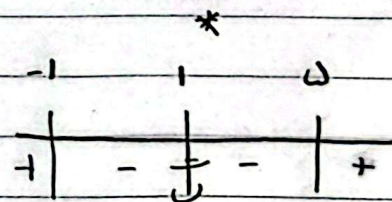


$$D_f = (-\infty, 1) \cup (2, 5)$$

$$x < 1, 2 < x < 5$$

$$\text{و) } \frac{x^2 - 1}{x^2 - 4x + 5} \geq 0$$

$$\frac{(x+1)(x-1)}{(x-1)(x-5)} \geq 0$$



$$D_f = (-\infty, -1] \cup [5, +\infty)$$

$$\text{الف) } \frac{(x-1)(x-3)}{x^2(x-1)} \geq 0$$

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

$\begin{array}{ccc} 0 & 1 & 3 \\ + & - & + \end{array}$

$$D_f = (-\infty, 0) \cup [3, \infty)$$

$$D_f = [3, +\infty)$$

$$\Rightarrow \sqrt{\frac{x^2 - 4x + 3}{(x+1)(x-1)}}$$

$$x \neq \pm 1$$

$$D_f = \mathbb{R} - \{-1, \pm 1\}$$

1/0

$$\text{الف) } \log(x^2 - 3x)$$

$$x^2 - 3x > 0$$

$$x(x-3) > 0$$

$$x > 3$$

$$x < 0$$

$$D_f = (-\infty, 0) \cup (3, \infty)$$

1/0

$$\Rightarrow 14 - x^2 > 0$$

$$|x| < \sqrt{14}$$

$$|x - 2| \neq 1$$

$$-1 < x < 1$$

$$x > 2, x < -2$$

$$x \neq \pm 2$$

$$D_f = (-\sqrt{14}, -2) \cup (2, \sqrt{14}) - \{-2, 2\}$$

$$D_f = (\sqrt{14}, 1) - \{4\}$$

$$\text{ج) } \frac{(6x-3)(x-4)}{(x-3)} > 0$$

$$\begin{array}{ccc} 3 & 4 & \\ - & - & + \end{array}$$

$$x > 4$$

$$D_f = (4, +\infty)$$

$$\text{د) } \sqrt{x^2 - 11x + 28} = (x-4)(x-7) > 0 \Rightarrow x < 4, x \geq 7 / x > 0, x \neq 1$$

$$14 - x^2 > 0 \Rightarrow -4 < x < 4 \quad | \quad D_f = (0, 1) \cup (1, 4)$$

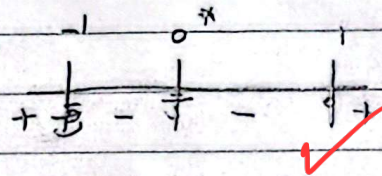
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Date:

$$y = \frac{x^2 - x}{x^2 + x} = \frac{x(x-1)}{x(x+1)}$$

	x	-1	0	1	
$x(x-1)$	+	+	0	-	+
$x(x+1)$	+	0	-	0	+
	+	-	-	-	+



-1

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

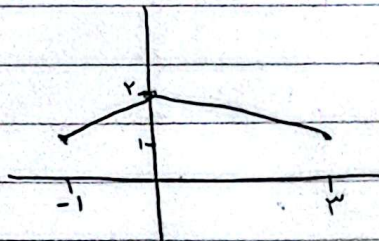
$$D_f = (-\infty, -2) \cup (2, \infty) \cup \{-1\}$$

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

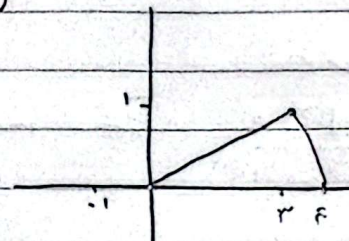
-4

-2

الف)

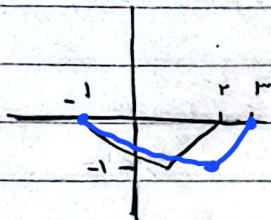


ب)

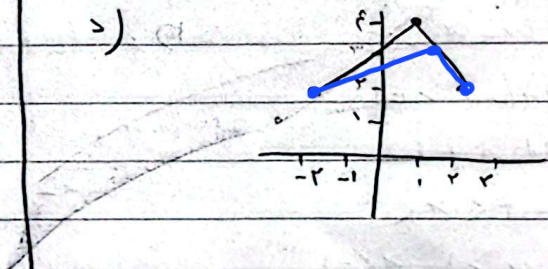


-10

ج)



د)



s.a.m