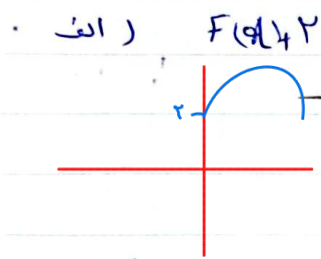
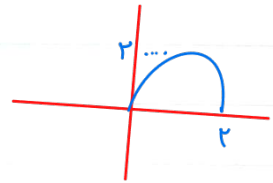


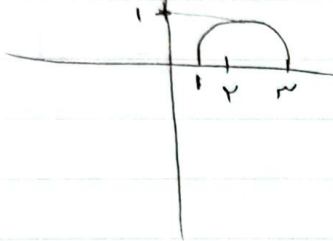
به دلیل نزدیکی نام و نام خانوادگی غرض شمایند می‌خواهیم از خود جدا شویم.



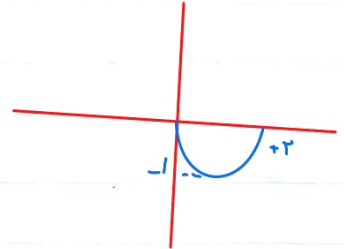
ب) $2F(x)$



ج) $f(x-1)$



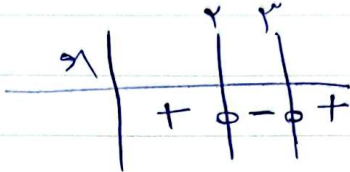
د) $-F(x)$



الف) $x^2 - 8x + 4 > 0$

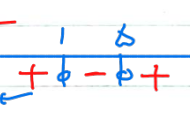
$(x-4)(x-2)$

$(-\infty, 2) \cup (4, +\infty)$



ب) $x^2 - 4x + 5 < 0$

$(x-2)^2 + 1$

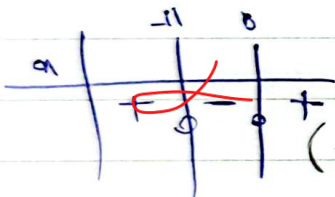


$\Delta = 16 - 20 = -4$

$\frac{-b \pm \sqrt{\Delta}}{2a}$

$\frac{4 \pm \sqrt{4}}{2}$

ج) $x^2 + 6x + 5 \geq 0$



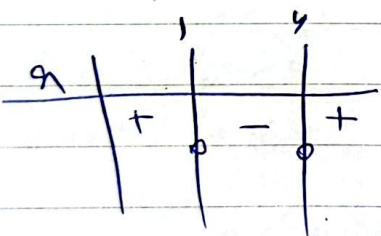
$\Delta = 36 - 20 = 16$

$\frac{-b \pm \sqrt{\Delta}}{2a}$

$\frac{-6 \pm 4}{2}$

د) $x^2 - 14x + 4 \leq 0$

$[1, 13]$



$\frac{-b \pm \sqrt{\Delta}}{2a}$

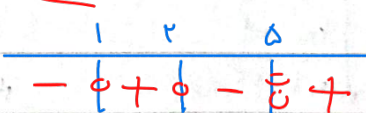
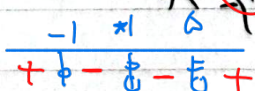
$(x-1)(x-2)$

ا و ب و ج و د در سه صورت

الف) $\frac{x^2 - 2x + 2}{x-1} < 0$

$x \neq 1$

$R \setminus \{1\}$



ب) $\frac{x^2 - 1}{x^2 - 4x + 5} \geq \frac{(x-1)(x+1)}{(x-1)(x-5)}$

$R \setminus \{1, 5\}$

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

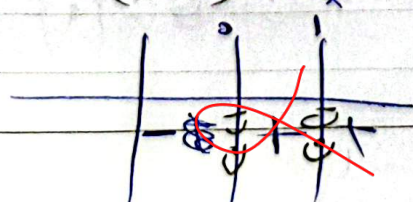
الف) $\sqrt{\frac{x^2 - 1}{x^2 - 4x + 5}}$

$(x \neq 1) (x \neq 5)$

$x(x^2 - 1) \neq 0$

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

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



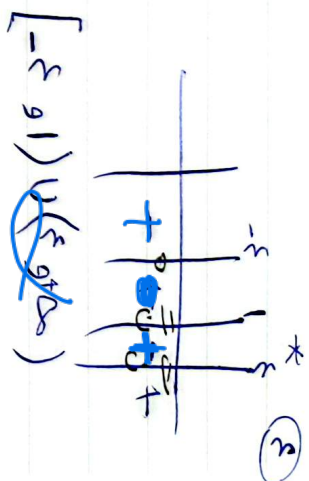
$(0, +\infty) - \{1\}$

$\frac{-1}{x} \cdot \frac{x+1}{x-1}$

$(-\infty, -1) \cup (0, +\infty) - \{1\}$

$$\sqrt{\frac{a^2 - 14}{a^2 - 8a + 4}}$$

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



$$\sqrt{3 - \sqrt{r - a}}$$

$$(-\infty, -5] \cup (1, +\infty) - \{4\}$$

$$[-14, 2] \quad -14 < a$$

$$3 \geq \sqrt{r - a} \Rightarrow 14 > r - a \Rightarrow 14 < a$$

$$\sqrt{r - \sqrt{a - r}}$$

$$a - r > 0 \Rightarrow a > r$$

$$r - \sqrt{a - r} > 0$$

$$[2, 11]$$

$$r > \sqrt{a - r} \Rightarrow 11 > a$$

$$y = \sqrt{3 - 2a}$$

$$3 - 2a^2 \geq 0 \Rightarrow -\sqrt{2} \leq a \leq \sqrt{2}$$

$$y = \sqrt{3 - 2a} = 9$$

$$1/16$$

$$r |a| - 9 > 0$$

$$r |a| > 9 \Rightarrow |a| > 9/r$$

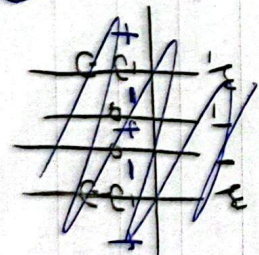
$$a > 9/r \quad a < -9/r$$

$$\sqrt{\frac{|a| + 1}{|a| - 2}} \neq 0$$

$$a \neq 9/5 - 3$$

$$\rightarrow R - 1 \pm 3$$

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



ب) ندره

$$\sqrt{\frac{|a| + 1}{|a| - 2}}$$

$$a \neq 9$$

$$\{0, 9, +\infty\} - \{9\}$$

$$1/16$$

$$\frac{\sin \alpha}{r \cos \alpha - 1}$$

$$r \cos \alpha \neq \frac{1}{r} \quad \left. \begin{matrix} r \cos \alpha \neq \frac{1}{r} \\ r \cos \alpha \neq \frac{1}{r} \end{matrix} \right\} \quad r \cos \alpha \neq \frac{1}{r}$$

(1)

$$y = \frac{\cos \alpha + 1}{r \sin \alpha + 1}$$

$$r \sin \alpha \neq -1$$

$$r \sin \alpha \neq -1$$

$$y = \frac{\tan \alpha + r}{\cot \alpha + 1}$$

$$\frac{\sin \alpha}{\cos \alpha} \neq 0$$

$$\frac{\cos \alpha}{\sin \alpha} \neq 0$$

$$\frac{\cos \alpha}{\sin \alpha} \neq 1$$

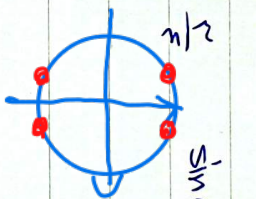
$$r \sin \alpha \neq -1$$

$$\frac{\sin \alpha + 1}{r \sin \alpha + 1}$$

$$r \sin \alpha \neq -1$$

$$\frac{\sin \alpha + 1}{r \sin \alpha + 1}$$

$$\sin \alpha \neq -\frac{1}{r}$$



$$r \sin \alpha \neq -\frac{1}{r}$$

$$y = \frac{1}{r \sin \alpha - r}$$

$$r \sin \alpha \neq r$$

(9)

$$r \sin \alpha \neq r$$

$$r \sin \alpha \neq r$$

(1)

$$r \sin \alpha \neq r$$

$$r \sin \alpha \neq r$$

$$r \sin \alpha \neq r$$

(10)

$$y = \frac{1}{r \sin \alpha - r}$$

$$r \sin \alpha \neq r$$

(1)

$$r \sin \alpha \neq r$$

$$r \sin \alpha \neq r$$

$$r \sin \alpha \neq r$$

$$y = \frac{1}{r \sin \alpha - r}$$

$$r \sin \alpha \neq r$$

$$r \sin \alpha \neq r$$

note