

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

$$2 \rightarrow \frac{2}{2}$$

$$\frac{225}{15} \left| \frac{2}{25} \right|$$

صفر

$$\boxed{\checkmark A} = \frac{225}{2}$$

$$D_f = \{1, 2, 3, 4, 5, 6, 7, 8, 9\} \quad -\frac{1}{2}x + 1$$

$$\frac{29}{2} + \frac{28}{2} + \frac{27}{2} + \frac{26}{2} + \frac{25}{2} + \frac{24}{2} + \frac{23}{2} + \frac{22}{2} + \frac{21}{2}$$

$$g(x) = \sqrt{x^2 + 4}$$

$$y = \sqrt{x^2 + 4} \rightarrow R_f = [2, +\infty)$$

$$\frac{2}{- \quad +} \rightarrow a = 0$$

$$\sqrt{ax^2 + bx + c}$$

$$\begin{cases} 2b + c = 0 \\ 2b + c = 1 \end{cases} \quad \begin{aligned} b &= 1 \quad c = -2 \\ a &= 0 \end{aligned}$$

$$f(-1) = \boxed{3}$$

$$x^2 - 2x - 1 = 0 \quad \leftarrow [-1, +\infty) - \{1\}$$

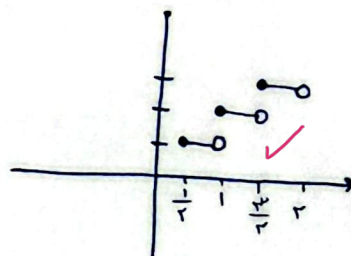
$$\boxed{b=4} \quad \frac{(x-2)(x+2)}{x-2} \quad \boxed{a=2} \quad \boxed{c=-1} \quad \leftarrow R_f = [-1, +\infty) \quad x^2 - 2x \rightarrow -\frac{\Delta}{2a} = -\frac{-2}{2} = 1$$

$$\sqrt{(x-2)^2} \quad \leftarrow D_f = [ab] \quad \leftarrow \sqrt{x^2 + ax^2 + bx - 1}$$

$$y = x - 2 \quad \leftarrow \begin{aligned} -2 &\rightarrow -1 \\ 12 &\rightarrow 10 \end{aligned} \quad R_f = [-1, 10]$$

$$\left(\frac{1}{2}, 1\right) \rightarrow \bullet + |z|$$

$$\left[1, \frac{2}{2}\right) \rightarrow |z| = 2 \quad \left[\frac{2}{2}, 2\right) \rightarrow 1 + 2 = 3$$



نقطه خط

صفحه اول آپلود شده و بقیه بدون اسم صفر لحاظ شود
دنا سوال اول رو مرتب کنیم این خواستار چیدن خودت

$$\text{الف) } 0 \leq \sin^2\left(x + \frac{\pi}{4}\right) \leq 1 \rightarrow -1 \leq 2\sin^2\left(x + \frac{\pi}{4}\right) - 1 \leq 1$$

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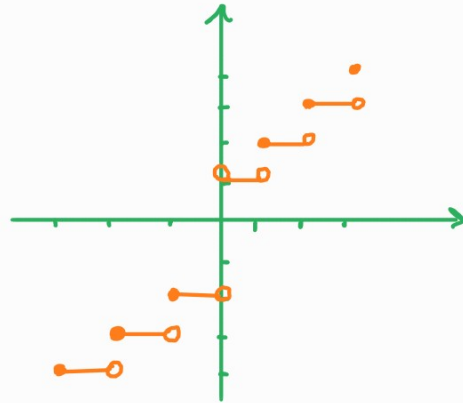
$$R_f = [-1, 1]$$

$$\text{ب) } -1 \leq \cos^3 x \leq 1 \rightarrow -1 \leq 3\cos^3 x - 4 \leq 1$$

$$R_g = [-1, 1]$$

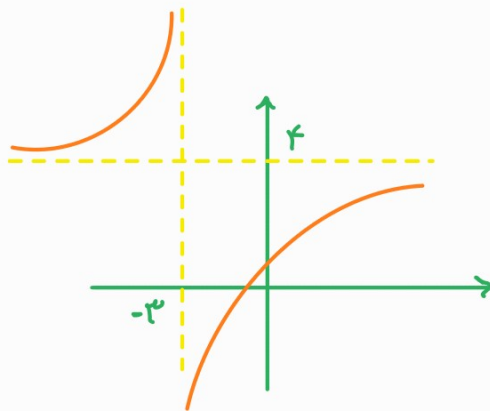
$$y = \begin{cases} [x] + 1 & x > 0 \\ [x] - 1 & x < 0 \end{cases}$$

$\Rightarrow$



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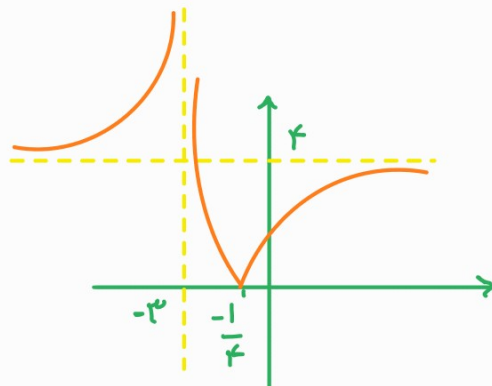
$$y = \frac{x+1}{x+3}$$



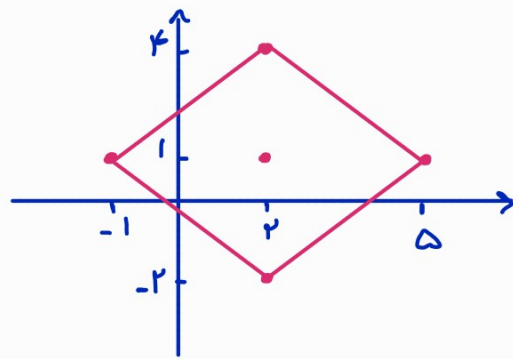
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قدر مطلق دور محل، مقعر ها رو پاد میانه قریبه
میانه بالات

$$y = \left| \frac{x+1}{x+3} \right|$$



$$\begin{cases} x \geq 2, y \geq 1 \rightarrow y = -x + 4 \\ x \geq 2, y \leq 1 \rightarrow y = x - 2 \\ x \leq 2, y \geq 1 \rightarrow y = x + 2 \\ x \leq 2, y \leq 1 \rightarrow y = -x \end{cases}$$



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الف) $f(x) = x + \frac{1}{x} + 2\sqrt{x + \frac{1}{x}}$

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$$\begin{cases} \min \square = \sqrt{2} \rightarrow f(x) = 2 + 2\sqrt{2} \\ \max \square \sim \infty \rightarrow f(x) = +\infty \\ \square = -\frac{b}{a} = -1 \quad x \end{cases}$$

$$\Rightarrow R_f = [2 + 2\sqrt{2}, +\infty)$$

ب) $y = (3 - \sin x)(1 + \sin x) = -\sin^2 x + 2\sin x + 3$

$$\begin{cases} \sin x = -1 \rightarrow y = 0 \\ \sin x = 1 \rightarrow y = 4 \\ \sin x = -\frac{b}{a} = 1 \rightarrow y = 4 \end{cases} \Rightarrow R_f = [0, 4]$$

۷- با توجه به دامنه، زیر رادیکال یک خط با شیب مثبت بورد یعنی $a=0$ است و نقطه $(2,0)$ هم در معادله خط صدق میکند...

$$\begin{cases} (2,0) \rightarrow 2b + c = 0 \\ (2,1) \rightarrow 2b + c = 1 \end{cases} \rightarrow b = 1, c = -2$$

$$g(x) = \sqrt{x^2 + 4} \rightarrow \text{ext} \Big|_x^0 \Rightarrow R_g = \sqrt{[4, +\infty)} = [2, +\infty)$$