

$D_f \Rightarrow 1 - x^2 \geq 0 \Rightarrow x^2 \leq 1 \Rightarrow -1 \leq x \leq 1$
 $D_f \cap D_g = \{-1, 0, 1\}$
 $(-1, 2 \times 1 - 3 \times 0) = (-1, 2), (1, 2 \times 1 - 3 \times 0) = (1, 2), (0, 0) \Rightarrow \{(-1, 2), (1, 2), (0, 0)\}$

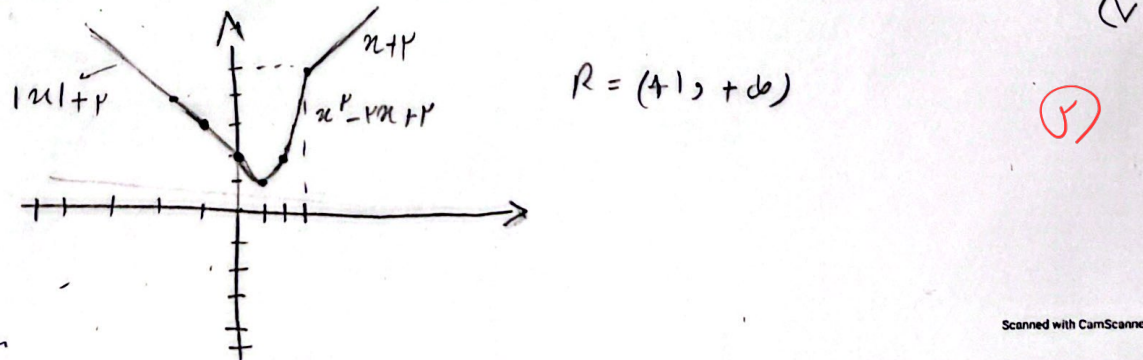
$R_f = (3 \times 1 - 1, +\infty) \rightarrow [2, +\infty)$
 $R_g = (-\infty, 4]$
 $(2, +\infty) \cup (-\infty, 4) \rightarrow \mathbb{R} - (4, 2)$

$-\frac{x^2}{2} + x + 3 > \frac{3}{2} \Rightarrow x^2 - 2x - 3 < 0$
 $(x-3)(x+1) < 0$
 $\sqrt{b-a} = \sqrt{4+3} = \sqrt{7} < 3$

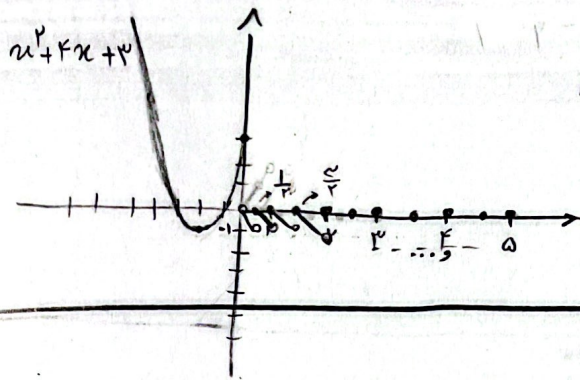
$y = |x-1| + |x-3| + |2x-4|$
 $\begin{bmatrix} 0 \\ 1 \end{bmatrix} \begin{bmatrix} 1 \\ 3 \end{bmatrix} \begin{bmatrix} 2 \\ 4 \end{bmatrix}$

$\begin{bmatrix} -2 \\ 0 \end{bmatrix} \begin{bmatrix} -1 \\ 1 \end{bmatrix} \begin{bmatrix} 0 \\ -2 \end{bmatrix} \begin{bmatrix} 1 \\ -3 \end{bmatrix}$
 $R = (-\infty, 1]$

$y = \frac{x^2 + \omega x + m}{x+1}$
 $x^2 + (\omega - y)x + m - y = 0$
 $\Delta \geq 0 \Rightarrow \omega^2 - 4y + 4\omega - 4m \geq 0$
 $m \leq 4 \Rightarrow \{1, 2, 3\}$



Scanned with CamScanner



$$R_f = [-1, +\infty)$$

(۸)

برای مختار شدن دادن فاصله‌ی بین ۲ عدد درست است
مقدور که مقیاس فاصله‌ها بیشتر و کمتر شده است

$$D_f \quad 2x + 3 > 0 \Rightarrow x > -\frac{3}{2} \Rightarrow \left[-\frac{3}{2}, +\infty\right)$$

$$R_f = (-\infty, a+1) \Rightarrow b = -\frac{3}{2} \text{ و } a = 4 \Rightarrow ab = -6$$

$$D_f = x \geq -1 \text{ و } x \leq +1 \Rightarrow [-1, 1]$$

$$3\sqrt{2+2\sqrt{1-x^2}} - (2\sqrt{x+1} + 4\sqrt{1-x}) = g(x)$$

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

$$g(x) = -\sqrt{1-x} + \sqrt{x+1} \sqrt{1-x}$$

$$\sqrt{x+1} + 1\sqrt{1-x} - \sqrt{2+2\sqrt{1-x^2}}$$

$$-2\sqrt{x+1} + 4\sqrt{1-x} + 2\sqrt{1-x} - 2\sqrt{x+1} = \sqrt{1-x}$$

$$0 \Rightarrow 1 - 19$$

$$\frac{1}{2} \Rightarrow \sqrt{\frac{1}{2}} + \sqrt{\frac{1}{2}} - \sqrt{1+1} = \sqrt{2} - \sqrt{2} = 0$$

$$R_{\sqrt{1-x}} = [0, \sqrt{2}]$$

$$f(\sqrt{2}+1)$$

R?