

نام و نام خانوادگی: سارینا دارخواه

$$f(x) = \{(1,0), (-1,0), (0,1)\}$$

تقاطع f, g ، α و β α و β α و β

$D = (-\infty, \alpha] \cup [\beta, +\infty)$

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$$\rightarrow \sqrt{b-a} \xrightarrow{a=1} -\frac{1}{4}x + 1 + \frac{1}{4} = \frac{3}{4}$$

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$(-x-1)$

$$R_f = (-\infty, 1]$$

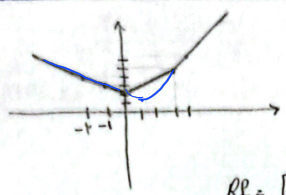
في حال W $W \leq y = \frac{x^2 + 2x + m}{x+1}$ W $W \leq y$ W $W \leq y$

$x^2 + 2x + m = (x+1)(x+2)$
 $\Rightarrow m = 2$

الحل هو

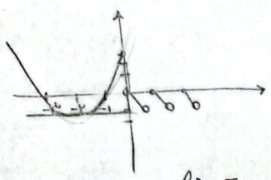
0

$f(x) = \begin{cases} x+1 & , x \geq 1 \\ x^2 - 2x + 1 & , 0 \leq x < 1 \\ |x| + 1 & , x < 0 \end{cases}$
 $x=1 \rightarrow 9 - 4 + 1 = 6$



$RP = [1, +\infty)$

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$(x+1)(x+2)$

$\frac{-b}{2a} = \frac{-2}{2} = -1$

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

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$x = \frac{1}{2} \rightarrow a+1 - \sqrt{1+x} = 0 \rightarrow a+1 - \sqrt{1+\frac{1}{2}} = 0$

$a = \sqrt{1+\frac{1}{2}}$

$x > \frac{1}{2} \rightarrow D_f$

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في حال W $W \leq y = \frac{x^2 + 2x + m}{x+1}$ W $W \leq y$ W $W \leq y$

$f(x) = \sqrt{x+1} + \sqrt{1-x}$ $D = [-1, 1]$

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

$x+1 \geq 0 \Rightarrow x \geq -1$ $1-x \geq 0 \Rightarrow x \leq 1$ $x=1 \rightarrow f(x) = \sqrt{2}$ $f(x) + g(x) = \sqrt{2} + \sqrt{1-1} = \sqrt{2}$

$x=-1 \rightarrow f(x) = \sqrt{0} = 0$ $f(x) + g(x) = 0 + \sqrt{1-(-1)} = \sqrt{2}$

$y = \frac{f(x)}{x} - \frac{g(x)}{x} \xrightarrow{x=1} \frac{\sqrt{2}}{1} - \frac{\sqrt{0}}{1} = \sqrt{2}$ $x=-1 \rightarrow \frac{0}{-1} - \frac{\sqrt{2}}{-1} = \sqrt{2}$ $RP = [0, \sqrt{2}]$

$$x^2 + (a-y)x + m-y = 0 \rightarrow x = \frac{y-a \pm \sqrt{(a-y)^2 - 4(m-y)}}{2} \rightarrow \geq 0 \quad (4)$$

$$\left\{ \begin{array}{l} ay > 0 \rightarrow 1 > 0 \\ \Delta < 0 \rightarrow m < 4 \rightarrow \end{array} \right.$$

m نمراتنه برابر 4 باشه

$$m = 1, 2, 3$$