

تعیین

19,5

سایه ها را بنویس

$$F(-1) = \sqrt{1-1} = 0$$

$$F(0) = \sqrt{1-0} = 1$$

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

$$y = y_F, y(1) - y(0) = 1$$

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$$\{(-1, 2), (0, 5), (1, 4)\}$$

$$D_F = \{2, 5, 4\}$$

$$\Rightarrow y = 2 \text{ and } 4 \text{ is } [1]$$

$$F(2) = y(2) - 1 = 5$$

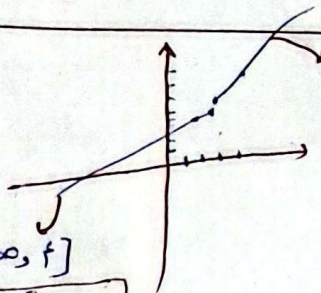
$$F(1) = y(1) - 1 = 4$$

$$y(2) = \frac{1}{2}(1) + 2 = \frac{5}{2}$$

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

$$D_{F(f)} \cup D_{F(g)} = [(-\infty, 1] \cup [5, +\infty)]$$



$$D_F = [5, +\infty)$$

$$y = \frac{x^2}{2} + x + 2 > \frac{x^2}{2} \Rightarrow -x^2 + (x+4)x > 0 \Rightarrow -x^2 + x + 4 > 0$$

$$\Delta = 1 + 16 = 17$$

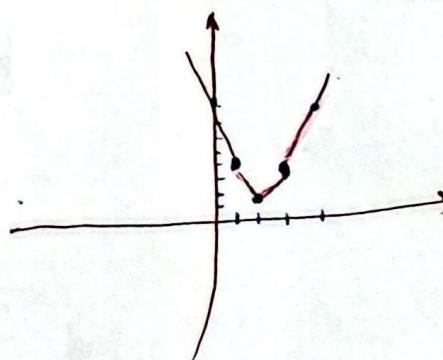
$$\frac{-b \pm \sqrt{\Delta}}{2a} = \frac{-1 \pm \sqrt{17}}{-2} = 2, \frac{-1 \pm \sqrt{17}}{-2} = -1$$

$$\sqrt{b-a} = \sqrt{2 - (-1)} = \sqrt{3}$$

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

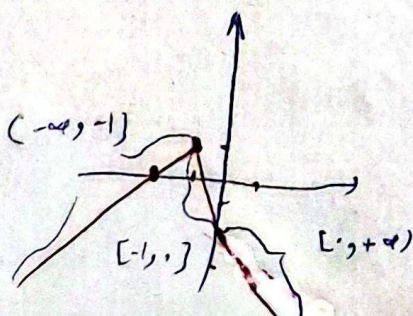
1	2	3
$1 - x + 2 - x + 2 - x$	$x - 1 - x + 2 + 1$	$x - 1 + x - 2 + x - 1$
$1 - 2x$	$2 - 2x$	$2x - 1$

$$\min y = \sqrt{2}$$



$$y = |x| - 2|x+1|$$

$$\frac{-1}{x+1} \mid -2x-2 \mid -x-2$$



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

$$y(x+1) = (x+1)(x+1) + (m-1) = yx + y = x^2 + 2x + 1 + m - 1$$

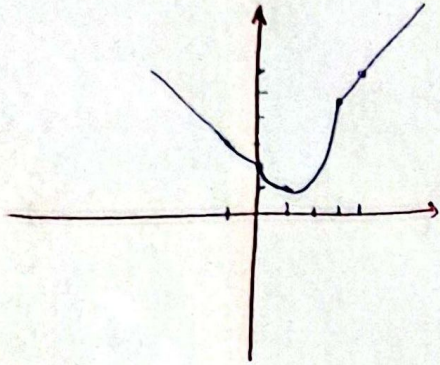
$$= x^2 + (2-y)x + (m-y) \quad \Rightarrow \quad (2-y)x - 1(m-y) = y^2 - 1 + y + y^2 - 1 + m + 1y$$

$$= y^2 - 2y + 2m - 1$$

$$\Delta y < 0 \Rightarrow y^2 - 2y - (2m - 1) < 0 \rightarrow y^2 - 1 < 0 + 2m < 0$$

$$\Rightarrow 1 > m < y^2 \rightarrow m < 1$$

ملاحظة: $1 > m < y^2$



$$x^2 - 2x + 1 \leq x < 2$$

$$x_{min} = \frac{-b}{2a} = \frac{+1}{1} = 1$$

$$y_{min} = (1)^2 - 2(1) + 1 = 0$$

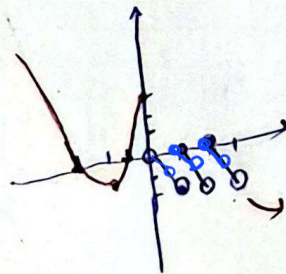
$$D_F = [1, +\infty)$$

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$$x^2 - 2x + 1 \rightarrow \frac{b}{2a} = \frac{-1}{1} = -1 \leq x_{min} \rightarrow y_{min} = (-1)^2 + 1(-1) + 1 = 1$$

$$1 \leq f(x) \leq 1 \Rightarrow f = 1$$

$$\frac{-1+1}{1} = 0 \quad \frac{-1+1}{1} = 0$$



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

$$[x_m] - x_m$$

(1,0)

$$\sqrt{x+1} \rightarrow x+1 \geq 0 \Rightarrow x \geq -1 \rightarrow m \geq -\frac{1}{f}$$

$$b = -\frac{1}{f}$$

$$a = f - \frac{1}{f} = \frac{f^2 - 1}{f}$$

$$\omega = a+1 = \sqrt{f - \frac{1}{f} + 1} \Rightarrow a \leq 1$$

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

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

$$\Rightarrow \frac{f(x)}{f} = \sqrt{x+1} + \sqrt{1-x} = \sqrt{x+1} + \sqrt{1-x} - \sqrt{x+1} + \sqrt{1-x}$$

$$\Rightarrow x \in [-1, 1]$$

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

$$D_F = [0, \sqrt{2}]$$

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