

$$f(x) = \sqrt{1-x} \Rightarrow 1-x \geq 0 \Rightarrow x \leq 1 \quad -2 \leq x < 1$$

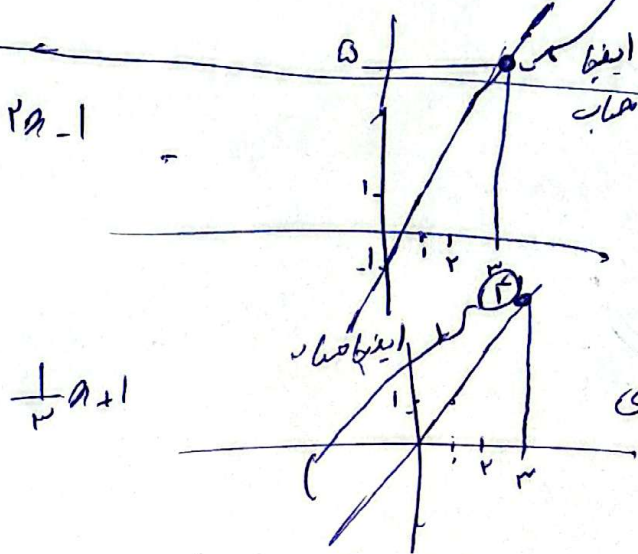
$$g = \{(-1,1), (0,1), (1,0), (1,1)\}$$

$$a = -1 \Rightarrow (rg - rf)(-1) = r(1) - r\sqrt{1-(-1)^2} = r$$

$$a = 0 \Rightarrow (rg - rf)(0) = r(1) - r\sqrt{1-0^2} = 0$$

$$a = 1 \Rightarrow (rg - rf)(1) = r(0) - r\sqrt{1-1^2} = 0$$

$$rg - rf = \{(-1,1), (0,1), (1,0)\}$$



$$a \geq 0 \Rightarrow P_f = [0, \infty) \quad \text{①}$$

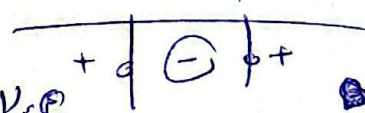
$$a \leq 0 \Rightarrow P_f = (-\infty, 0] \quad \text{②}$$

$$\text{①} \cup \text{②} = (-\infty, \infty)$$

$$-\frac{a^2}{r} + a + r > \frac{r}{r} \Rightarrow -\frac{a^2}{r} + a + 1 > 0 \Rightarrow a^2 - 2a - r < 0$$

$$\text{حل: } a = (-1, 3)$$

$$\sqrt{b-a} = r = 1, \sqrt{r} = 1$$



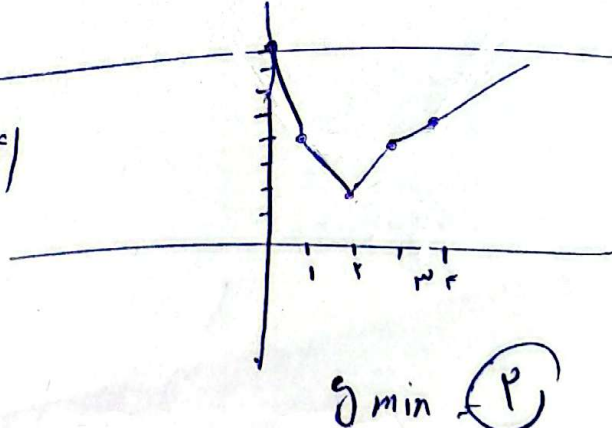
$$g = |a-1| + |a-3| + |2a-4|$$

$$a < 0 \quad g = 1$$

$$a = 1 \quad g = 2$$

$$a = 2 \quad g = 3$$

$$a = 3 \quad g = 4$$



$$g = |n| - 2|n+1|$$

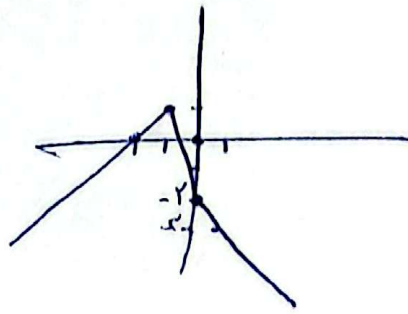
$$n = 0 \Rightarrow g = -2$$

$$n = -1 \Rightarrow g = 1$$

$$n = 1 \Rightarrow g = -2$$

$$n = -2 \Rightarrow g = 0$$

$$x_5 = [-\infty, 1]$$



برای $n = -1$
 تابع مثبت تعریف است
 پس مقدار m دیگر ندارد
 باز می ماند x (خارج)

برای $n = 1$ هیچ مقدار m جواب

$$n^2 - 2n + 2$$

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

$$f(1) = 1$$

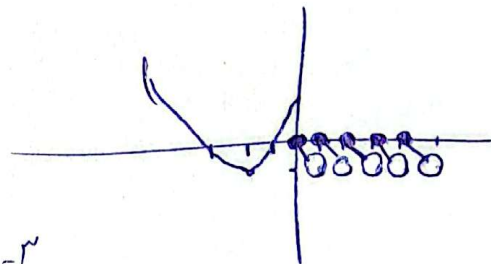
$$f(2) = 2 + 2 = 4$$

$$f(0) = 0 + 2 = 2$$

$$\Rightarrow Rf = [1, +\infty)$$

$$\alpha_{ext} = \frac{-b}{2a} = \frac{-(-2)}{2} = 1$$

$$\delta_{ext} = (-2)^2 + f(-2) + 2 = -1$$



$$n^2 + 4n + 3 = (n+1)(n+3) = 0 \Rightarrow n = -1 \text{ or } n = -3$$

$$g = a + 1 - \sqrt{2a+3}$$

$$2a+3 \geq 0 \Rightarrow a \geq -\frac{3}{2}$$

$$Rf = [-\frac{3}{2}, +\infty)$$

$$a+1=0 \Rightarrow a=-1$$

$$a \times h = \frac{-3}{2} \times 2 = -3$$

$$h = \frac{-3}{2}$$

max تابع زمانی است
 کمترین مقدار می شود
 چون $\sqrt{0}$
 $\sqrt{C}$ شماره و زدن می باشد
 دینش منفی می شود
 بزرگترین مقدار است

حل المسألة $f(x) = 2\sqrt{x+1} + 5\sqrt{1-x}$ مجال

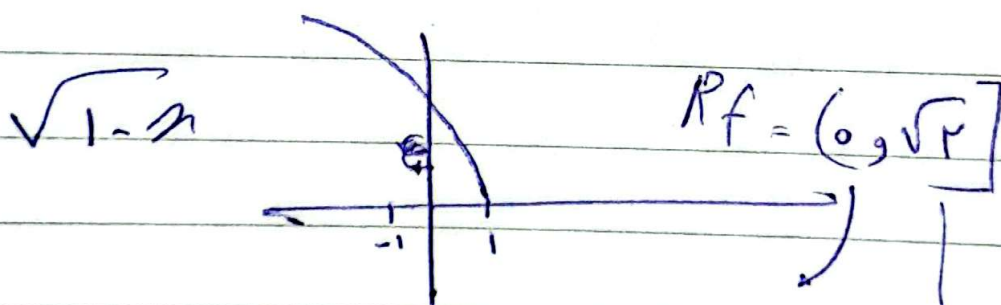
$$f(x) + g(x) = 2\sqrt{x+1} + 2\sqrt{1-x} = 2\sqrt{1-x} + \sqrt{1+x} = 2(\sqrt{1-x} + \sqrt{1+x}) \quad \text{E.D.}$$

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

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

$$g = \frac{f(x)}{4} - \frac{g(x)}{2} = \frac{2\sqrt{x+1} + 2\sqrt{1-x}}{4} - \frac{\sqrt{x+1} - \sqrt{1-x}}{2}$$

$$= \frac{\sqrt{x+1} - \sqrt{1-x}}{2} = \frac{\sqrt{x+1} + 2\sqrt{1-x} - \sqrt{x+1} + \sqrt{1-x}}{2} = \frac{3\sqrt{1-x}}{2} = \sqrt{1-x}$$



المجال $[-1, 1]$
نطاق $[0, \sqrt{2}]$

$$Df = [-1, 1]$$

$$\sqrt{1-x}$$

$$x=1$$

$$\sqrt{2}$$

$$x=-1$$

$$2\sqrt{x+1} + 5\sqrt{1-x}$$

NEGAN
COVER

$$x+1 \geq 0 \quad x \geq -1 \quad \text{①}$$

$$1-x \geq 0 \Rightarrow x \leq 1 \quad \text{②}$$