

۱.

الف)

$$-4 \leq 3x - 2 \leq 2 \quad , \quad -2 \leq 3x \leq 4 \quad , \quad \frac{-14}{3} \leq x \leq \frac{4}{3}$$

$$D_f = \left[\frac{-14}{3}, \frac{4}{3} \right]$$

ب)

$$-4 \leq x \leq -2 \quad , \quad -2 \leq 3x \leq -4 \quad , \quad -1 \leq x \leq -\frac{4}{3}$$

$$D_f = [-1, -\frac{4}{3}]$$

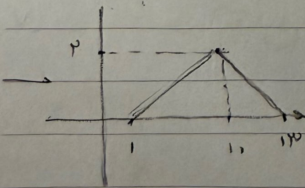
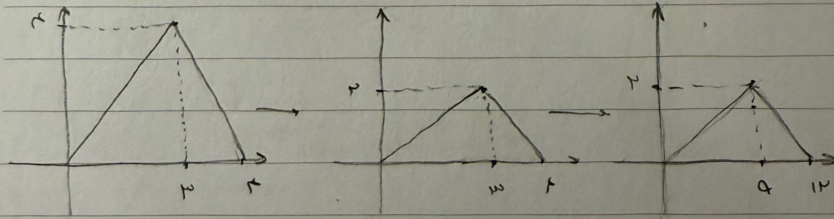
۲. می پرورد با خط x می نامواست، داین نقاط باقرینه کنی نسبت به خط $x=2$ خنن می کنی، پس فقط 2 داور به دانست انتقال می دهیم.

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

به جی x $x-2$ می کنایم

$$\sqrt{x-4} = 2 \quad , \quad x-4 = 4 \quad , \quad x = 8$$

۳.



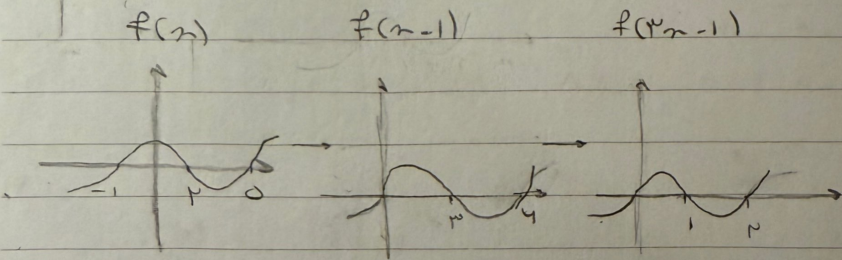
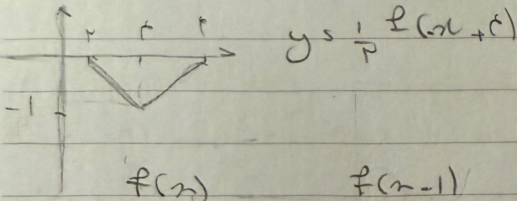
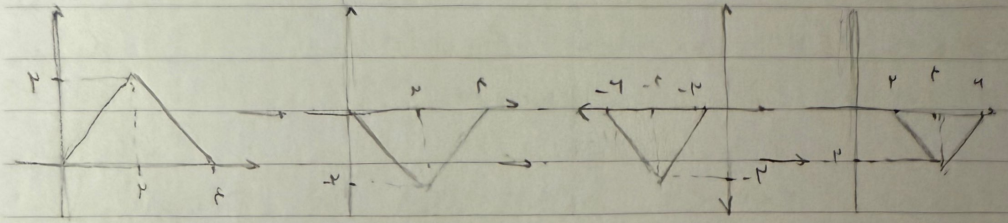
$$S = \frac{(13-1) \times 4}{2} = 12$$

۴.

$$\frac{x-a}{2} + 2 = \frac{x-a+4}{2} + x-a+4$$

$$\frac{2(2+a+4-a)}{2} + a = 2(a+4) - 1 \quad , \quad 2a+4 - a = -4$$

$$y = f(x-p) \quad y = f(x-p) \quad y = f(x+p) \quad y = f(-x+p) \quad 5$$



$$y = \sqrt{(x+p)f(x-p)} \quad \frac{-p}{-p} \quad \frac{0}{0} \quad \frac{1}{1} \quad \frac{2}{2} \quad \rightarrow D_f = [-p, 0] \cup [1, 2]$$

7. باید فقط در مورد f و g با هم

$$f(0) \leq 0 - 1 \leq f(0, k)$$

$$g(x) = f(x, k) - 1 \quad g(0) = f(0, k) - 1 \leq 0$$

$$|2x-1| \leq 1 \rightarrow |2x-1| \leq 1 \rightarrow 2x-1 \leq 1 \rightarrow 2x \leq 2 \rightarrow x \leq 1$$

$$|2x-1| \leq 1 \rightarrow 2x-1 \geq -1 \rightarrow 2x \geq 0 \rightarrow x \geq 0$$

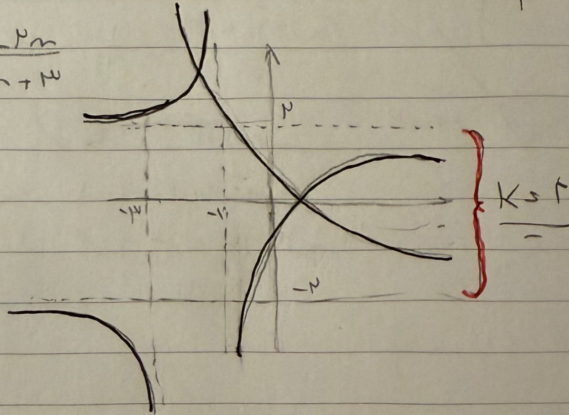
$$0 \leq x \leq 1$$

ایک طرفی

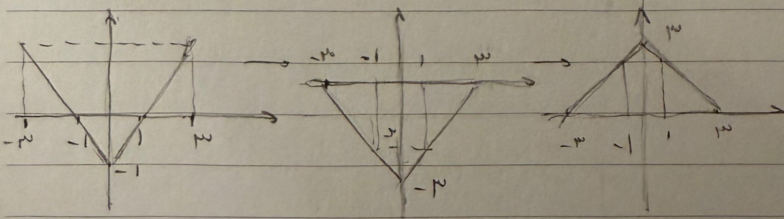
$$f(n) = \frac{r^n - 1}{n+1} \quad \text{قریب نسبت} \quad f(n) = \frac{-(r^n - 1)}{n+1} \quad \text{مول} \quad f(n) = \frac{-(\frac{r^n}{n} - 1)}{\frac{r}{n} + 1}$$

$$s = \frac{\frac{r^n - 1}{n}}{\frac{r^n + 1}{n}} = \frac{r^n - 1}{r^n + 1}$$

$$g(n) = \frac{r^n - 1}{r^n + 1} + k$$

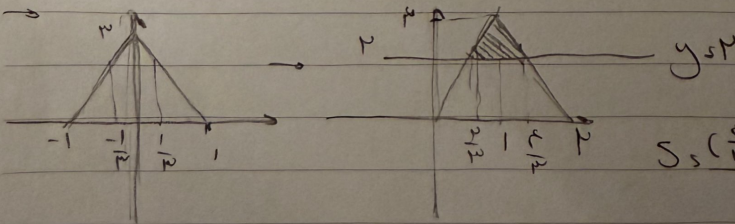


$$y = f\left(\frac{x}{n}\right) + p \quad y = f\left(\frac{x}{n}\right) \quad y = f\left(\frac{x}{n}\right)$$



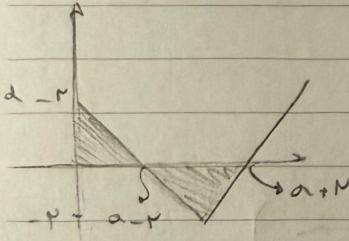
$$y = f(x)$$

$$y = f(x-1)$$



$$S = \frac{1}{2} \times \frac{1}{2} \times \frac{1}{2} = \frac{1}{8}$$

$$f(x) = |x-a| - p$$



$$S = \frac{(a-p)(a-p)}{2} + \frac{(a+p)(a-p)}{2} \times \frac{1}{2} = \frac{a}{2}$$

-10

$$\frac{(a-p)(a-p)}{2} = \frac{1}{2} \rightarrow (a-p)^2 = 1$$

$$a-p = 1 \rightarrow a = p + 1$$

$$a-p = -1 \rightarrow a = p - 1 < 0$$

$$f\left(\frac{1}{p}\right) = \left|\frac{1}{p} - p\right| - p = \frac{1}{p} - p - p = \frac{1}{p} - 2p$$