

موضوع: _____

تاریخ: _____

الف) $f(x) = \begin{cases} x^2 - 2x + 2 & x \leq 1 \\ x^2 - 2x + 1 & x > 1 \end{cases}$ $Df = \begin{cases} 2x - 2 & x \leq 1 \\ 2x - 2 & x > 1 \end{cases}$

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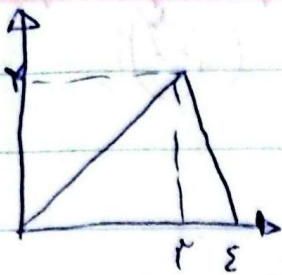
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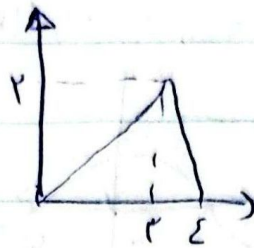
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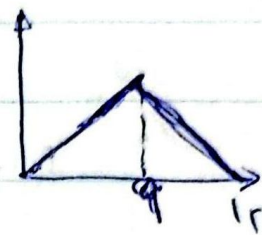
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$$f(x_{n+1})$$



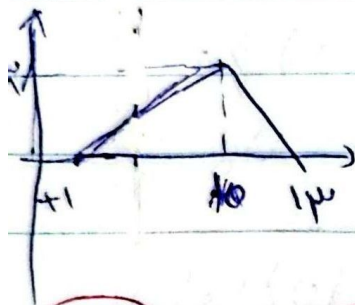
$$f(x_{n+1})$$



$$f(x_{n+1})$$

سوال ۲

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

✓

$$y = x + 2 f(x) = x + (-4) \Rightarrow y = x - 4$$

سوال ۳

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$$\frac{x - x}{2} = 2 \Rightarrow x - x = 2 \rightarrow 2 + x = 4$$

$$y = 2x - 4 \Rightarrow x - 4 = 2(2 + x) - 4 \Rightarrow x - 4 = 4 + 2x - 4$$

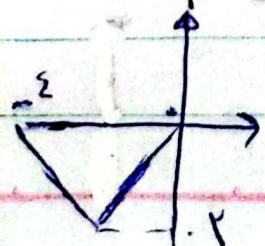
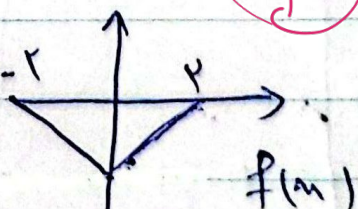
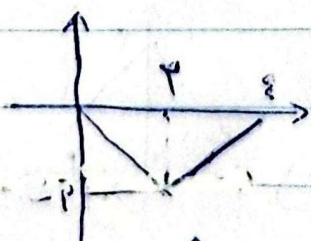
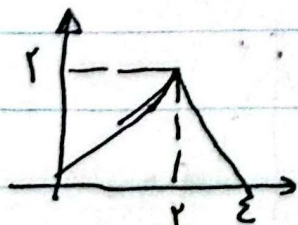
$$x = -4$$

✓

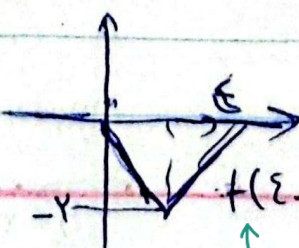
سوال ۴: نمودار $y = -f(x-2)$ بر روی محور مختصات رسم کنید. (بدینجهت حواسم بریزید که صورت سؤال درست است)

سوال ۵

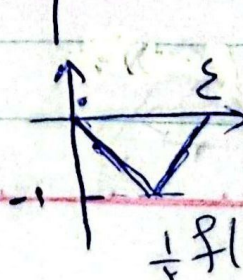
۱



$$f(x+2)$$



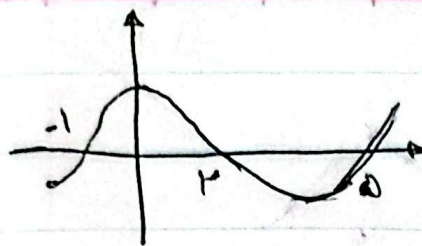
$$f(2-x)$$



$$\frac{1}{2} f(2-x)$$

$$-2 \leq x \leq 2 \rightarrow 2 \leq 2-x \leq 4$$

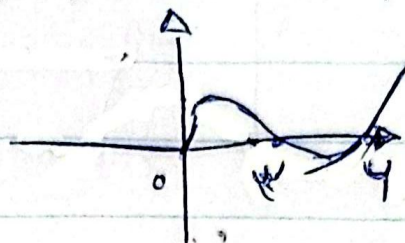




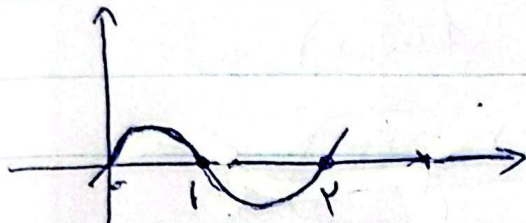
$f(n)$

$$D_f \Rightarrow y = \sqrt{-(n+2)f(n-1)}$$

(9) 18

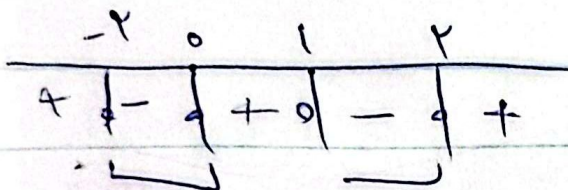


$f(n-1)$



$$-(n+2)f(n-1) > 0$$

$$(n+2)f(n-1) < 0$$



$$\Rightarrow D_f = [-2, 0] \cup [1, 2]$$

$$g(n) = |f(n+2) - 3| + 1 - 3 \Rightarrow g(n) = |f(n+2) - 3| - 2$$

(10) 18

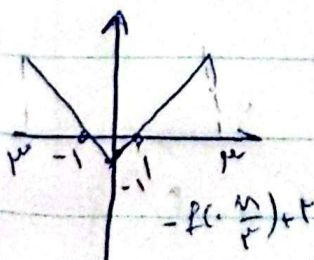
نقطه ۱ و ۲
در ۱ و ۲

$$n = 0 \quad f(0) = g(0) \Rightarrow |f(0) - 3| + 1 - 3 = |f(0) - 3| - 2$$

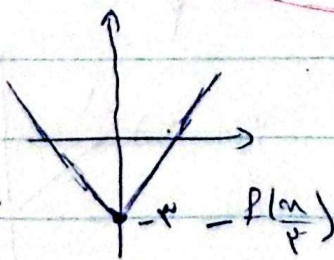
$$|f(0) - 3| - 2 = |f(0) - 3| - 2 \Rightarrow |f(0) - 3| = 4 \Rightarrow f(0) = 7 \text{ or } -1$$

$$f = |f(0) - 3| - 2 \Rightarrow |f(0) - 3| = 4 \Rightarrow f(0) = 7 \text{ or } -1$$

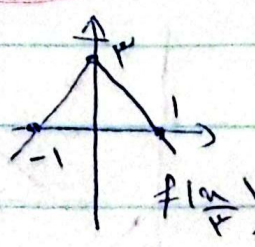
(11) 18



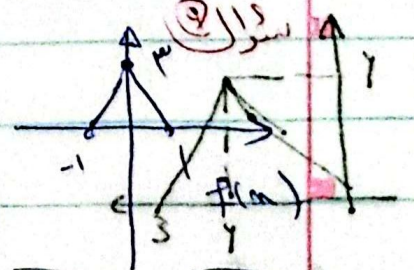
$-f(\frac{n}{2}) + 1$



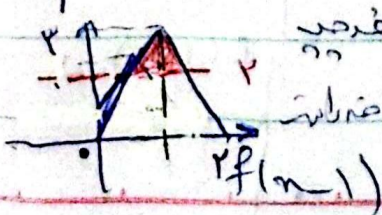
$-f(\frac{n}{2}) - 1$



$f(\frac{n}{2})$



$f(n)$



$f(n-1)$

$$a_n + b_n = a(1) + 0 = 1 \Rightarrow a = 1$$

$$a_n + b_n = a(1) + b(1) = 0 \Rightarrow -1 + b = 0 \Rightarrow b = 1$$

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

$$a = -1$$

$$b = 1$$

$$n = \frac{1}{2}$$

(12) 18

$$S = \frac{\frac{k}{r} - \frac{r}{k} \times 1}{r} = \frac{\frac{k}{r}}{r} - \frac{1}{k} = \frac{k}{r^2} - \frac{1}{k}$$

$$- \frac{\frac{k}{r}n - 1}{\frac{k}{r}n + 1} = \frac{rn - 1}{n + 1} = \frac{-rn + r}{n + r} + k = \frac{rn - 1}{n + 1}$$

$$\frac{-rn + km + r + rk}{n + r} = \frac{rn - 1}{n + 1} \Rightarrow \frac{(k-r)n + r(1+k)}{n + r} = \frac{rn - 1}{n + 1}$$

$$((k-r)n + r + rk)(n+1) = (rn-1)(n+r)$$

$$(k-r)n^2 + (k-r)n + (r+rk)n + r + rk = rn^2 + rn - n - r$$

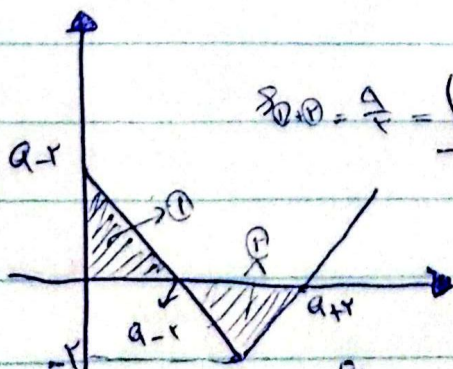
$$k-r = r \quad (k+1) = 0 \quad r+rk = -r \quad 0 = n$$

$$k = 2$$

$$k = 1$$

$$k = -2$$

کے لیے جسے تاہم میں n خط درجہ و فقط ایک بار حساب
ہے نہ فقط درجہ اس کے



$$S_{1+2} = \frac{a}{r} = \frac{(a-r)(a-r)}{r} + \frac{(a+r-a+r)r}{r} = \frac{a}{r}$$

$$\frac{(a-r)r}{r} + \frac{r \times r}{r} = \frac{a}{r}$$

$$f(a-r)$$

$$\frac{(a-r)r}{r} = \frac{1}{r} \Rightarrow a-r = \frac{1}{r}$$

$$a = 3 \rightarrow$$

$$a = 1 \rightarrow a-r \rightarrow -1 \times \frac{1}{a} = f\left(\frac{1}{a}\right) = f\left(\frac{1}{r}\right) = \left|\frac{1}{r} - 1\right| - r = \frac{r}{r}$$