

کلاس: نہ جانے

توالی

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 Roll No: 14
 Date: 14/05/2024
 Subject: Mathematics
 Topic: Calculus
 Question: Find the derivative of $y = x^2 + 3x - 5$ with respect to x .
 Answer: The derivative of y with respect to x is $\frac{dy}{dx} = 2x + 3$.

الف) $f(x) = P_f[-\varepsilon, \varepsilon]$ $P_f \{f(x_n - \varepsilon) = 0\}$
 $-\varepsilon \leq x_n - \varepsilon \leq \varepsilon$ $-\varepsilon \leq x_n \leq \varepsilon$ $-\frac{\varepsilon}{4} \leq x \leq \frac{\varepsilon}{4}$ $P_f = [-\frac{\varepsilon}{4}, \frac{\varepsilon}{4}]$

c) $f(x, y) \rightarrow DP = \{-\infty\} \rightarrow P_{n-1}^{x=-2}, P_{n-1}^{y=-2} = -12$

$$r_n = r \quad \frac{r = -1}{\text{;}} \quad \mu(-1) - r = -1 \rightarrow D_f = [-1, -1]$$

$$y = m + \sqrt{n - x} \Rightarrow y = m + \sqrt{n - \varepsilon} \Rightarrow y = m + \sqrt{n} \varepsilon \Rightarrow$$

$$y = \left(\sqrt{n-2} + \frac{1}{r} \right)^r \rightarrow y - \frac{1}{\varepsilon} = \left(\sqrt{n-2} + \frac{1}{r} \right)^r =$$

$$\sqrt{y - \frac{1}{2}} = \sqrt{x - 2} + \frac{1}{x} \Rightarrow \left(\sqrt{y - \frac{1}{2}} + \frac{1}{x} \right)^2 = x - 2$$

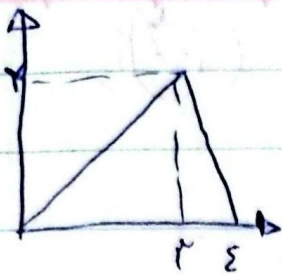
$$f^{-1}(n) = \left(\sqrt{n - \frac{10}{2}} - \frac{1}{r} \right)^r + 2 = n \Rightarrow \left(\sqrt{n - \frac{10}{2}} - \frac{1}{r} \right)^r = n - 2$$

$$\sqrt{n - \frac{10}{2}} - \frac{1}{T} = \sqrt{n - 2} \rightarrow \sqrt{n - \frac{10}{2}} = \sqrt{n - 2} + \frac{1}{T}$$

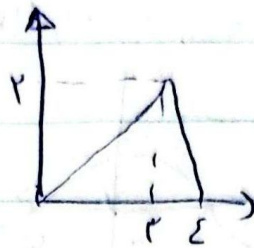
$$n - \frac{15}{2} = n - 2 + \frac{1}{2} + \sqrt{n-2} \rightarrow \sqrt{n-2} = \dots \Rightarrow n=3$$

$$\left[\sqrt{f} - \frac{1}{\varepsilon} \cdot \frac{1}{f} \right]^2 + \varepsilon \rightarrow f$$

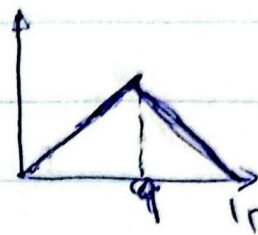
مسألة ٢



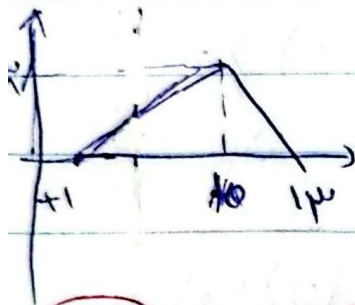
$f(x_{n+1})$



$f(x_{n+1})$



$f(x_{n+1})$



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

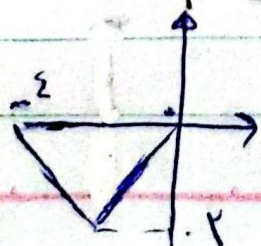
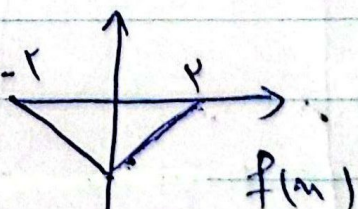
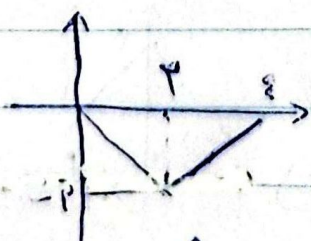
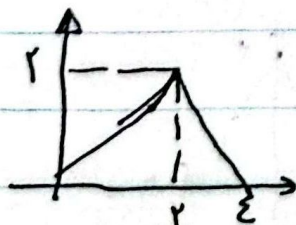
$$y = x + 2 f(x) = x + (-4) \Rightarrow y = x - 4$$

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

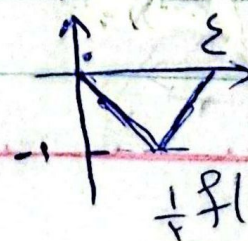
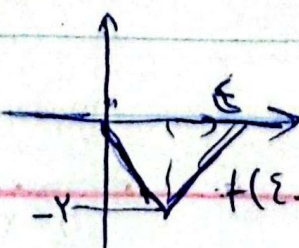
$$y = 2x - 4 \Rightarrow x - 4 = 2(2 + x) - 4 \Rightarrow x - 4 = 4 + 2x - 4$$

$$x = -4$$

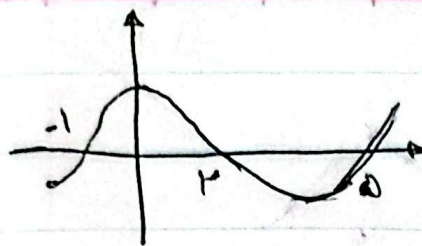
نقطة ٢: نقول $y = -f(x-2)$ برهون مقال باسره
نقطة ٣: تابع $y = \frac{1}{2} f(2-x)$ را رسم كنيد (بدون حواسم برت سكه برت سوال فرست)



$f(x+2)$



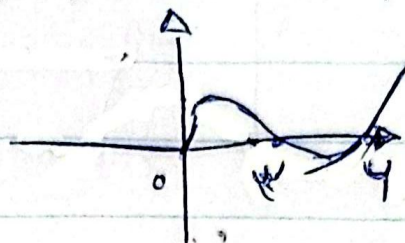
$\frac{1}{2} f(2-x)$



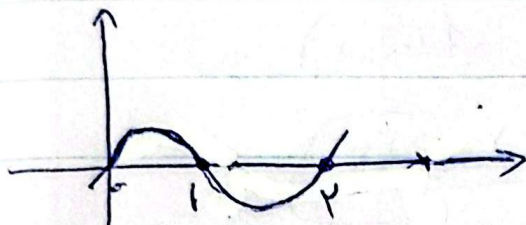
$f(n)$

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

(9) 18

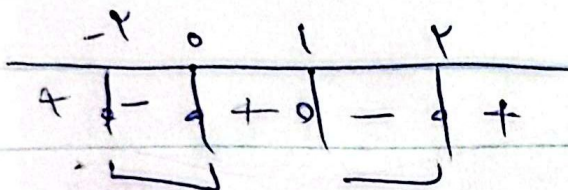


$f(n-1)$



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

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



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

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

(10) 18

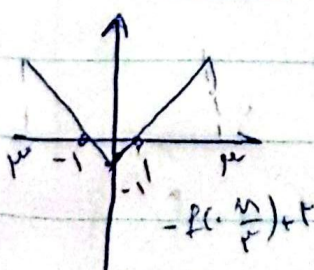
نقطه ۱ و ۲
در ۱ و ۲

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

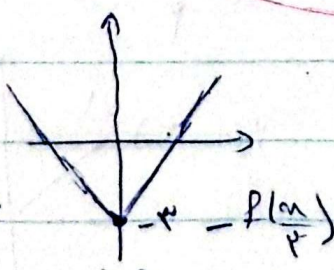
$$\Rightarrow |k-3| = 4 \Rightarrow k = 7$$

$$f = |k-3| - 2 \Rightarrow |k-3| = 4 \Rightarrow k = 7$$

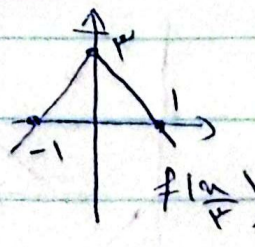
(نقطه ۱ و ۲ در ۱ و ۲)



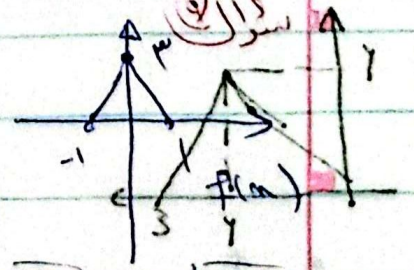
$-f(\frac{n}{2}) + 1$



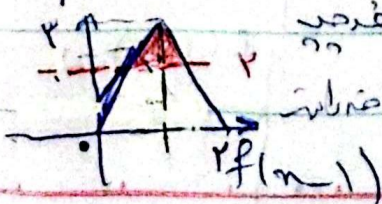
$-f(\frac{n}{2})$



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



(11) 18



نقطه ۲

نقطه ۲

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

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

$$a + b = 1 \Rightarrow 1 + 1 = 1 \Rightarrow 2 = 1$$

$$a = -1$$

$$b = 1$$

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

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

①

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

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

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

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

$$k-r = r \quad (k+k^2) = 0 \quad k+k^2 = -r \quad 0 = n$$

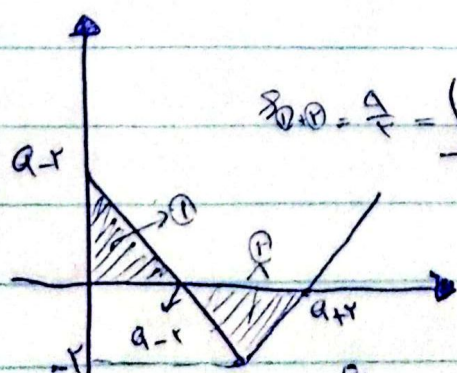
$$\boxed{k=2}$$

$$k=1$$

$$k=-2$$

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

②



$$S_{\text{shaded}} = \frac{a}{r} = \frac{(a-r)(a-r)}{r} + \frac{(a+r-a+r)r}{r} = \frac{a}{r}$$

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

$$f(n-a)r$$

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

$$a=3 \rightarrow$$

$$a=1 \rightarrow a-r \rightarrow -1 \times \frac{1}{a} = f\left(\frac{1}{a}\right) = f\left(\frac{1}{r}\right) = \left|\frac{1}{r} - 3\right| - r = \frac{r}{3}$$