

ویانا صبردر $\sqrt{}$ تالیف شماره هفت $\sqrt{}$ دوازدهم دفتر ۱۵ سه شنبه

سوال یک) $D_{f(n)} = [-2, 2]$ $D \rightarrow P \rightarrow f\left(\frac{3n+2}{4}\right)$

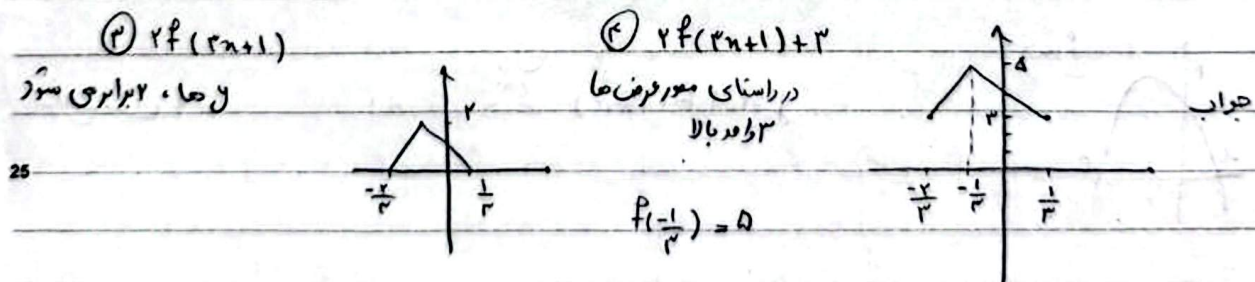
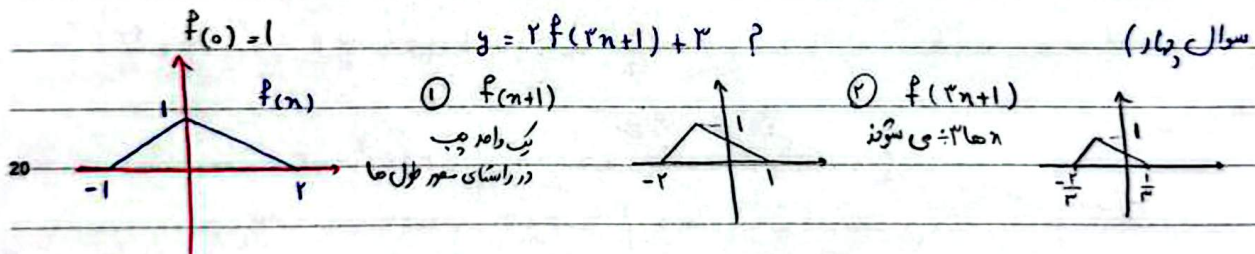
۵ $L: -2 \leq x \leq 2$ $\Rightarrow -2 \leq \frac{3n+2}{4} \leq 2 \Rightarrow -10 \leq 3n+2 \leq 10 \Rightarrow -12 \leq 3n \leq 8 \Rightarrow -4 \leq n \leq \frac{8}{3}$
 $\Rightarrow -4 \leq n \leq 4 \Rightarrow D_{f'} = [-4, 4]$ جواب

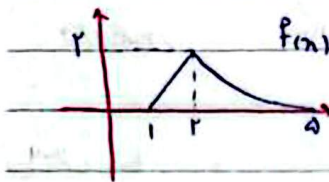
سوال دو) $f(n-2) \Rightarrow D = [-2, 2]$ $D_{f(n)} = ? = [-8, 8]$ جواب

۱۰ $L: -2 \leq n \leq 2 \Rightarrow -4 \leq 3n \leq 4 \Rightarrow -1 \leq \frac{3n-2}{4} \leq 1 \Rightarrow -1 \leq f \leq 1$
 $\Rightarrow -1 \leq f \leq 1$ داخل f

سوال سه) $f\left(\frac{3n+1}{4}\right) \Rightarrow D = [-1, 3]$ $f(2-5n) \Rightarrow D = ?$

۱۵ $L: -1 \leq n \leq 3 \Rightarrow -3 \leq 3n \leq 9 \Rightarrow -2 \leq 3n+1 \leq 10 \Rightarrow -1 \leq \frac{3n+1}{4} \leq \frac{10}{4}$
 $\Rightarrow -1 \leq f \leq \frac{5}{2}$ داخل f
 $\Rightarrow \frac{5}{2} \geq x \geq -\frac{3}{4}$ $D_{f'} = \left[-\frac{3}{4}, \frac{5}{2}\right]$ جواب



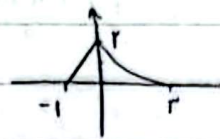


$$y = \frac{1}{r} f(r - rn) ?$$

سوال پنج

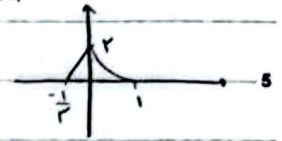
$$f(r) = 2$$

① $y = f(r + rn)$
 ۲ واحد در راستای محور طول ها
 به چپ می رویم



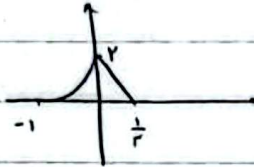
$$② y = f(r + rn)$$

۲ واحد را ۳



$$③ y = f(r - rn)$$

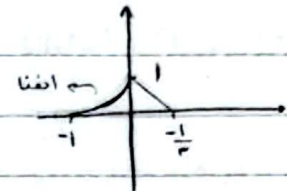
قرینه نسبت به محور طول ها



$$④ y = \frac{1}{r} f(r - rn)$$

۲ واحد نصف می شوند

$$f(0) = 1$$



جواب

10

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

سیار از
انتقال

(۴,۳) رأس

قطع محور n ها؟

سوال شش

$$\frac{-b}{2a} = \frac{-\frac{2}{3}}{2 \times (-\frac{1}{3})} = \frac{2}{5} \Rightarrow -\frac{1}{3} \times \frac{4}{25} + \frac{2}{3} \times \frac{4}{5} + 1 = -\frac{4}{75} + \frac{16}{15} + 1 = \frac{28}{15}$$

رأس
از این
۴/۳
۲۸/۲۵

15

$$\text{انتقال افقی} \rightarrow f\left(\frac{2}{5}\right) = \frac{17}{5} \quad \text{انتقال عمودی} \rightarrow 3 \times \frac{28}{15} = \frac{47}{5}$$

$$y = -\frac{1}{3}x^2 + \frac{2}{3}x + 1 = -\frac{1}{3}\left(x - \frac{2}{3}\right)^2 + \frac{28}{27} \Rightarrow -\frac{1}{3}\left(x - \frac{2}{3}\right)^2 + \frac{28}{27} = 0$$

قطع محور x ها = 0

$$\Rightarrow y = -\frac{1}{3}\left(x - \frac{2}{3}\right)^2 + \frac{28}{27} = 0 \Rightarrow y = -\frac{1}{3}\left(x - \frac{2}{3}\right)^2 = -\frac{28}{27}$$

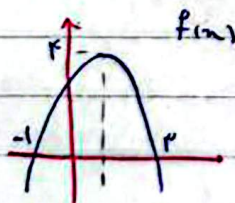
سیار از انتقال

$$\Rightarrow y = \left(x - \frac{2}{3}\right)^2 = 9 \Rightarrow \begin{cases} x - \frac{2}{3} = 3 \Rightarrow x = \frac{10}{3} \\ x - \frac{2}{3} = -3 \Rightarrow x = -\frac{8}{3} \end{cases}$$

جواب

جواب

20



$$y = 1 - 2f(rn + r)$$

رأس
سیار

(α, β)

سوال هفت

$$f(rn + r) = 1 \Rightarrow (1, 2) \Rightarrow f(1) = 4$$

25

$$\begin{cases} rn + r = 1 \Rightarrow rn = -1 \Rightarrow n = -\frac{1}{r} \Rightarrow f\left(-\frac{1}{r}\right) = 4 \\ 1 - 2f(1) = 1 - 2 \times 4 = -7 \end{cases}$$

رأس می جدید

$$\alpha = -\frac{1}{r}, \beta = -7 \Rightarrow \alpha\beta = -\frac{1}{r} \times -7 = \frac{7}{r}$$

جواب

30

$$D_f = (a, 4] \quad , \quad D_g = [-1, b)$$

$$a - b = ?$$

(سوال هست)

$$\Rightarrow -3 - 4 = -7 \quad \text{جواب}$$

$$y = f(n-1) + g(n+1) \Rightarrow D_y = (-2, 4)$$

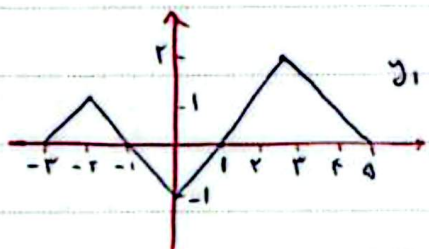
$$a < n-1 \leq 4 \xrightarrow{+1} a+1 < n \leq 4 \Rightarrow D_{f(n-1)} = (a+1, 4]$$

$$-1 \leq n+1 < b \xrightarrow{-1} -2 \leq n < b-1 \Rightarrow D_{g(n+1)} = [-2, b-1)$$

$$\xrightarrow{\text{اشتراک}} (-2, 4)$$

$$\Rightarrow b-1 = 4 \Rightarrow b = 5$$

$$a+1 = -2 \Rightarrow a = -3$$



$$y_1 = f\left(\frac{x}{2} + 1\right)$$

بردار تابع f است
و بردار این تابع برابر است

$$y_r = \sqrt{|2f(n) - 3|}$$

$$D_{y_r} = ? \quad R_{y_r} = ?$$

(سوال نه)

$$-3 \leq x \leq 5 \xrightarrow{\div 2} -\frac{3}{2} \leq \frac{x}{2} \leq \frac{5}{2} \xrightarrow{+1} -\frac{1}{2} \leq \frac{x}{2} + 1 \leq \frac{7}{2}$$

$$-\frac{1}{2} \leq f \leq \frac{7}{2} \quad D_{y_r} = \left[-\frac{1}{2}, \frac{7}{2}\right] \quad \text{جواب}$$

$$-1 \leq f(n) \leq 2 \xrightarrow{\times 2} -2 \leq 2f(n) \leq 4 \xrightarrow{-3} -5 \leq 2f(n) - 3 \leq 1$$

$$\text{اینجا از کد تابع} \Rightarrow 0 \leq |2f(n) - 3| \leq 4 \Rightarrow 0 \leq \sqrt{|2f(n) - 3|} \leq 2$$

$$R_{y_r} = [0, 2] \quad \text{جواب}$$

$$f(n) = \left| \frac{n+1}{n-3} \right| \xrightarrow{\text{واسطه } r} \left| \frac{n-2+1}{2(n-2)+1} \right| = \left| \frac{n-1}{2n-3} \right|$$

(سوال ده)

$$\xrightarrow{\text{یک واسطه}} \left| \frac{n-1}{2n-3} \right| + 1 = g(n)$$

$$-1 > x < -n-1$$

$$n + \left| \frac{n-1}{2n-3} \right| + 1 < 0 \Rightarrow \left| \frac{n-1}{2n-3} \right| < -n-1$$

$$\Rightarrow n+1 + \frac{n-1}{2n-3} < 0 \Rightarrow \frac{(n+1)(2n-3) + (n-1)}{2n-3} < 0 \Rightarrow \frac{2(n-2)}{2n-3} < 0$$

که مخرج منفی باشد و دایره

Page : ()

Date : . .

$$x^2 - r > 0 \Rightarrow x^2 > r \Rightarrow \left. \begin{array}{l} x > \sqrt{r} \\ x < -1 \end{array} \right\} \Rightarrow (-\infty, -\sqrt{r}) \text{ جواب}$$