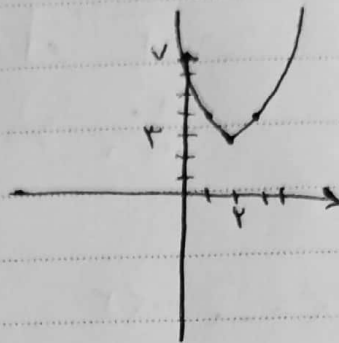


الف) $y = n^2 - 4n + 7$



①

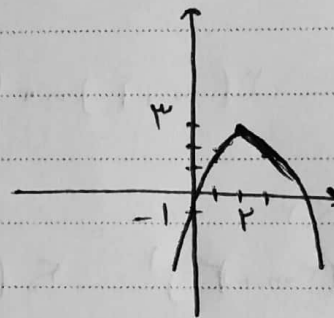
②

$\Delta = 16 - 28 < 0$ $x = 2$

ext $\left| \begin{array}{l} -\frac{b}{2a} = 2 \\ -\frac{\Delta}{4a} = 3 \end{array} \right.$

n	1	2	3
y	4	3	4

ب) $y = -n^2 + 4n - 1$



max $\left| \begin{array}{l} 2 \\ 3 \end{array} \right.$

n	1	2	3
y	2	3	2

$2n^2 + (m+1)n + \frac{1}{2}m + 2 = 0$

$\Delta > 0$ $(m+1)^2 - 4 \left(\frac{1}{2}m + 2 \right) = m^2 - 2m - 1 > 0$ (الف) $m = \frac{2 \pm \sqrt{4 + 4}}{2} = 1 \pm \sqrt{2}$

$m \in [1 - \sqrt{2}, 1 + \sqrt{2}]$ $m \in [1 - \sqrt{2}, 1 + \sqrt{2}]$

$m^2 - 2m - 1 > 0 \rightarrow m \in [1 - \sqrt{2}, 1 + \sqrt{2}]$

$m^2 - 2m - 1 < 0 \rightarrow m \in (-\infty, 1 - \sqrt{2}) \cup (1 + \sqrt{2}, \infty)$

$m^2 - 2m - 1 > 0$

$m \in [1 - \sqrt{2}, 1 + \sqrt{2}]$

د) $m \in [1 - \sqrt{2}, 1 + \sqrt{2}]$

ب) ریشه مضاعف

ج) ریشه حقیقی نداشت

نوع برخورد داشت حافظ

Fri	Thu	Wed	Tue	Mon	Sun	Sat
04	03	02	01			
11	10	09	08	07	06	05
18	17	16	15	14	13	12
25	24	23	22	21	20	19
		30	29	28	27	26

$$(m-2)n^2 - 2(m+1)n + 10$$

$$\Delta > 0$$

$$\Delta < 0$$

$$\Delta > 0$$

$$\frac{2m+2}{m-2} < 0 \rightarrow (-1, 2)$$

$$\frac{10}{m-2} > 0 \rightarrow m > 2$$

$$10(m-2) < 0 \rightarrow m < 2$$

$$\frac{2m+2}{m-2} < 0 \rightarrow (-1, 2)$$

$$(m-2)n^2 - 2(m+1)n + 10$$

$$\Delta < 0 \rightarrow m < 2$$

$$\Delta > 0 \rightarrow (2m+2)^2 - 40(m-2) > 0 \rightarrow m^2 - 12m + 24 > 0 \rightarrow (-2, 6)$$

$$-\frac{b}{2a} = -\frac{2(m+1)}{2(m-2)} = -\frac{m+1}{m-2} \rightarrow -1 < -\frac{m+1}{m-2} < 2 \rightarrow m > 2$$

$$\frac{2n^2}{r} - 2(\sin \alpha)n + \frac{r}{r} \geq 0$$

$$\sin^2 \alpha > 1 \rightarrow \sin \alpha \geq 1 \rightarrow \sin \alpha = 1$$

$$\Delta \geq 0 \rightarrow 4 \sin^2 \alpha - 4 \geq 0$$

$$\begin{aligned} 2n^2 - 2n + 1 &\geq 0 \\ 2n^2 - 4n + 2 &\geq 0 \rightarrow n \geq \frac{r}{2} \end{aligned}$$

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8

$$y = \frac{(r_n^r - r_{n-1}) (r_n^r - r_{n-1} - d)}{(1 - r^r)}$$

④

۵۲

9

$$\frac{r_n^r - r_{n-1}}{r_n^r - r_n} \cdot \frac{n-1}{r_{n+1}}$$

$$\frac{r_n^r - r_{n-1} - d}{r_n^r + r_n} \cdot \frac{n+1}{r_{n+1} - d}$$

$$y = \frac{(r-1)(r_{n+1})(n+1)(r_{n+1}-d)}{(r-1)(n+1)}$$

$$(r_{n+1})(r_{n+1}-d) \cdot y$$

$$y = \frac{r_n^r - r_{n-1} - d}{r_{n+1} - d}$$

10

$$y_s = \frac{199 - (-r_0)}{r_{10}} = \frac{r_{10}}{r_{10}}$$

11

$$m n^r - (m+q) n - r_{20}$$

$$r S_2 \cdot d p + v$$

$$\frac{r_{m+q}}{m} = \frac{-10 + v_m}{m}$$

$$\frac{r_{m+q} - 10 + v_m}{m}$$

$$r_{m+q} - 10 = 0$$

$$m = r$$

⑤

۵۲

12

$$r^r + \beta^r = S^r - r_p \rightarrow \frac{q}{r} + 12 \frac{1r}{r} \leftarrow r_n^r - q_{n-1} - r_{20}$$

13

$$\frac{r^r + \beta^r}{\omega \beta^r}$$

$$n^r - \omega n + r_{20}$$

⑥

۵۲

14

$$\rightarrow \frac{r^r}{\omega \beta^r} + \frac{\beta^r}{\omega} \rightarrow \frac{r^r}{(1) \frac{r_0}{q^r}} + \frac{\beta^r}{\omega} \rightarrow \frac{r^r}{\omega} + \frac{\beta^r}{\omega}$$

$$S_2 \cdot d \cdot p_2^r$$

$$r \beta = r \rightarrow \beta = \frac{r}{q}$$

$$\left(\frac{1}{\omega} \right) (1^r \omega r_0) \leftarrow \frac{1}{\omega} (S^r - r_{ps})$$

15

$$\omega \beta^r = \frac{r_0}{q^r} (1)$$

$$= 19$$

لغة جهان استاندارد

Fri Thu Wed Tue Mon Sun Sat

04 03 02 01

11 10 09 08 07 06 05

18 17 16 15 14 13 12

25 24 23 22 21 20 19

26 25 24 23 22 21 20

۴۰۴

$$y_1 = 2n + 1 \quad y_2 = 9n + 5 \quad b_n + C$$

$$n = 2$$

$$y_1 = 4$$

$$y_2 = 14$$

$$n = 2$$

$$\begin{cases} 4a + 2b = 10 \\ 9a - 2b = 0 \end{cases}$$

$$4a + 9a = 10 \rightarrow a = 1 \quad b = 2$$

$$n^2 + 2n + 4 = 9$$

$$n = 2$$

$$n^2 + (m+1)n + m + 4 = n \rightarrow n^2 + mn + m + 4 = n$$

$$\Delta = m^2 - 4(1)(m+4)$$

$$m^2 - 4m - 16 = 0$$

$$(m-8)(m+2) = 0$$

$$m = 8 \quad -4$$