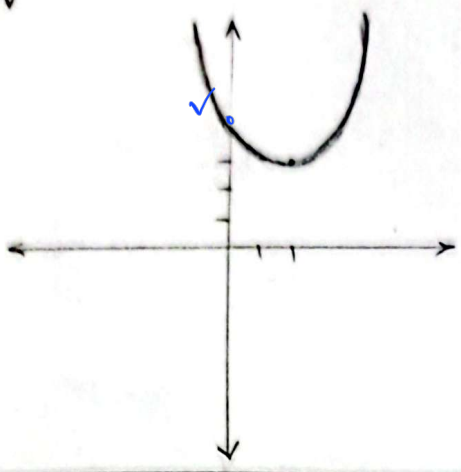


19,5

1

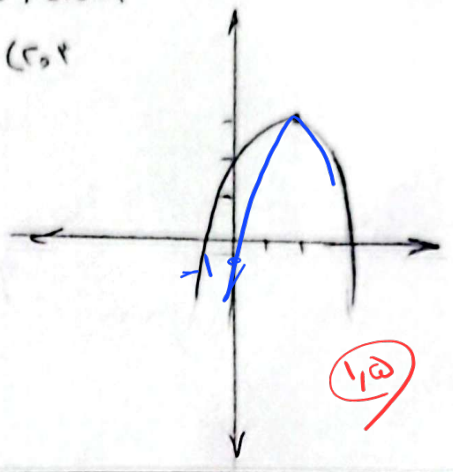
الف) $y = x^2 - 8x + 7$

محور x را $(2, 2)$



ب) $y = -x^2 + 8x - 1$

محور x را $(4, 2)$



19,5

2

$y = 2x^2 + (m+1)x + \frac{1}{2}m + 2 = 0 \rightarrow a = 2 \quad b = m+1 \quad c = \frac{1}{2}m + 2$

الف) درستی مقادیر

$\Delta > 0 \rightarrow \Delta = (m+1)^2 - 4(2)(\frac{1}{2}m + 2) \rightarrow m > 5$
 $\rightarrow m^2 - 2m - 1 > 0 \rightarrow (m-2)(m+3) > 0 \rightarrow m < -3$

ج. بدون استفاده از محاسبه

$\Delta < 0 \rightarrow m^2 - 2m - 1 < 0$
 $\rightarrow (m-2)(m+3) < 0 \rightarrow -3 < m < 2$

ب. درستی مقادیر

$\Delta = 0 \rightarrow m^2 - 2m - 1 = 0 \rightarrow m = -3$
 $\rightarrow (m-2)(m+3) = 0 \rightarrow m = 2$

د. برای m

$\Delta \geq 0 \rightarrow m^2 - 2m - 1 \geq 0$
 $\rightarrow m \geq 2$
 $\rightarrow m \leq -3$

5

3

$y = (m-2)x^2 - 2(m+1)x + 1 = 0 \rightarrow a = m-2 \quad b = -2(m+1) \quad c = 1$

الف) درستی مقادیر m را از طریق Δ و $S = -\frac{b}{a}$ و $P = \frac{c}{a}$ بررسی کنید.

$\Delta > 0 \rightarrow S = -\frac{b}{a} < 0 \rightarrow \frac{2(m+1)}{m-2} < 0 \rightarrow -1 < m < 2$
 $P = \frac{c}{a} > 0 \rightarrow \frac{1}{m-2} > 0 \rightarrow m > 2$
 $\Delta(m^2 - 4m + 1) > 0 \rightarrow m = \frac{1 \pm \sqrt{3}}{2} \rightarrow$ جواب برابر

ب. درستی مقادیر m را از طریق Δ و $S = -\frac{b}{a}$ و $P = \frac{c}{a}$ بررسی کنید.

$\Delta = 4m^2 - 4(m+1) = 4(m^2 - m - 1)$
 $\Delta > 0 \rightarrow m^2 - m - 1 > 0 \rightarrow m > 2$
 $S = -\frac{b}{a} = \frac{2(m+1)}{m-2} < 0 \rightarrow -1 < m < 2$
 $P = \frac{c}{a} = \frac{1}{m-2} < 0 \rightarrow m < 2$
 $x = -\frac{b}{2a} = \frac{m+1}{m-2} < 0 \rightarrow -1 < m < 2$

4

$y = (m-2)x^2 - 2(m+1)x + 1 = 0 \rightarrow a = m-2 \quad b = -2(m+1) \quad c = 1 \quad \Delta = 4(m^2 - 4m + 1)$

الف) درستی مقادیر m را از طریق Δ و $S = -\frac{b}{a}$ و $P = \frac{c}{a}$ بررسی کنید.

$\Delta > 0 \rightarrow 4(m^2 - 4m + 1) > 0 \rightarrow m < 2$
 $P = \frac{c}{a} = \frac{1}{m-2} < 0 \rightarrow m < 2$
 $y(0) = 1 > 0 \rightarrow a = m-2 < 0 \rightarrow m < 2$

ب. درستی مقادیر m را از طریق Δ و $S = -\frac{b}{a}$ و $P = \frac{c}{a}$ بررسی کنید.

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

5

5

$\frac{2x^2}{3} - (2\sin\alpha)x + \frac{4}{3} = 0 \quad \alpha > 0 \quad \alpha = \theta \rightarrow \alpha = \frac{\pi}{2}$

$\rightarrow x^2 - 3\sin\alpha x + 2 = 0 \rightarrow a = 1 \quad b = -3\sin\alpha \quad c = 2$

$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \rightarrow \frac{3\sin\alpha \pm \sqrt{9\sin^2\alpha - 8}}{2} \rightarrow \sin^2\alpha = 1 \rightarrow \sin\alpha = \pm 1$
 $\rightarrow$ if $\sin\alpha = 1 \rightarrow x = \frac{1}{2} = \frac{\pi}{2}$
 $\rightarrow$ if $\sin\alpha = -1 \rightarrow x = \frac{1}{2}$

5

$$y = \frac{(r_n^r - r_{n-1})(r_n^r - r_{n-d})}{1 - r_n^r} \rightarrow \text{man: ?} \quad (6)$$

$$\left. \begin{aligned} (r_n^r - r_{n-1}) &\Rightarrow (n-1)(r_{n+1}) \\ (r_n^r - r_{n-d}) &\Rightarrow (n+1)(r_{n-d}) \\ (1 - r_n^r) &\Rightarrow -(n-1)(n+1) \end{aligned} \right\} \frac{(n-1)(r_{n+1})(n+1)(r_{n-d})}{-(n-1)(n+1)} = -(r_{n+1})(r_{n-d})$$

$$\rightarrow -4r_n^r + 1r_{n+1} + d \quad (5)$$

$$y_{\text{man}} = \frac{-A}{\epsilon a} = \frac{-149.1r_0}{-r\epsilon} = \frac{r_{19}}{r\epsilon}$$

$$mx^r - (m+r)x - r = 0 \quad \psi(s) = \Delta(\rho) + V \quad \alpha^r + \beta^r = \rho \quad (7)$$

$$\psi(\alpha + \beta) = \Delta(\alpha \cdot \beta) + V \rightarrow S = \frac{m+r}{m}, \rho = \frac{-r}{m} \rightarrow \psi\left(\frac{m+r}{m}\right) = \Delta\left(\frac{-r}{m}\right) + V \rightarrow m = \epsilon \quad (5)$$

$$\alpha^r + \beta^r = S^r - r\rho = \frac{9}{\epsilon} - r\left(\frac{-1}{\epsilon}\right) = \frac{9}{\epsilon} + \frac{\epsilon}{\epsilon} = \frac{1r}{\epsilon}$$

$$S = \frac{r}{\epsilon} \quad \rho = \frac{-1}{\epsilon}$$

$$x^r - \alpha x + r = 0 \rightarrow \alpha \quad \frac{\epsilon \alpha + \beta^d}{\Delta \beta^r} \quad (8)$$

$$\rightarrow S = \frac{-b}{a} = \alpha \quad \beta^r = \Delta \beta - r$$

$$\rho = \frac{c}{a} = r \quad \left. \begin{aligned} \beta^r - \Delta \beta + r = 0 &\rightarrow \beta^r = \beta(\Delta \beta - r) = \Delta \beta^r - r\beta \\ \beta^r &= r\beta - 10 \end{aligned} \right\} \quad (5)$$

سے جس ترتیب (اگر کسی بھی صورت میں) β راہیں

$$\beta^d = 474\beta - 10 \rightarrow \alpha = \Delta - \beta \rightarrow \frac{r_0 - \epsilon \beta + \epsilon 474\beta - r_{10}}{2\Delta \beta - 10} = \frac{474\Delta \beta - 190}{2\Delta \beta - 10} = \frac{4\Delta \beta - 38}{\Delta \beta - r} = 19 \quad (19)$$

$$y_1 = ax^r + bx + c \quad y_r = rx + 10 \quad \text{مقرن:} \quad (9)$$

$$n = r_0 - r \quad y = \epsilon$$

$$\rightarrow y = a(n-r)(n+r) = a(n^r + n - 4) \quad (5)$$

$$ax^r + bx + c = rx + 10 \rightarrow ax^r + (b-r)x + (c-10) = 0$$

$$y = x^r + rx + \epsilon \rightarrow x_{\text{as}} = \frac{-b}{ra} = -\frac{r}{r} \quad \rightarrow a = a, b = a + r, c = \epsilon = -4a + 10 \rightarrow a = 1 \text{ جس } b = r$$

$$y = rx^r + (m+1)x + m + 4 \rightarrow \text{جس پر تشریح:} \quad (10)$$

$$\Delta = 0 \text{ جس } \Rightarrow \Delta = 0 \rightarrow m^r - 1m - \epsilon 1 = 0 \rightarrow m = -\epsilon \quad (5)$$

$$\rightarrow m = 1r \quad \text{غیر } \Delta = 0$$

$$\frac{-b}{ra} = -\frac{r}{r} \quad \text{دریافتی اہل } \Delta = 0$$