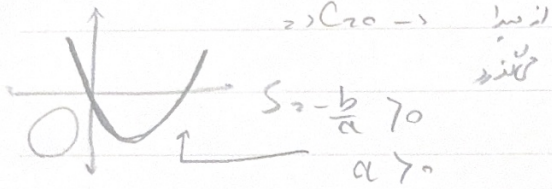
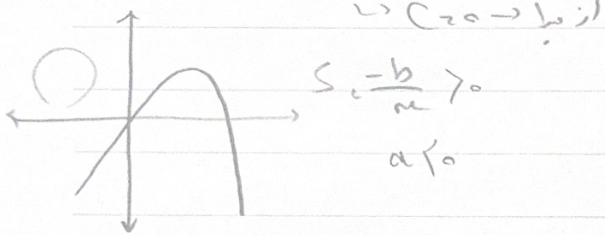


الف)  $y = x(3x - 2) \rightarrow$  از ریشه دوم

۱

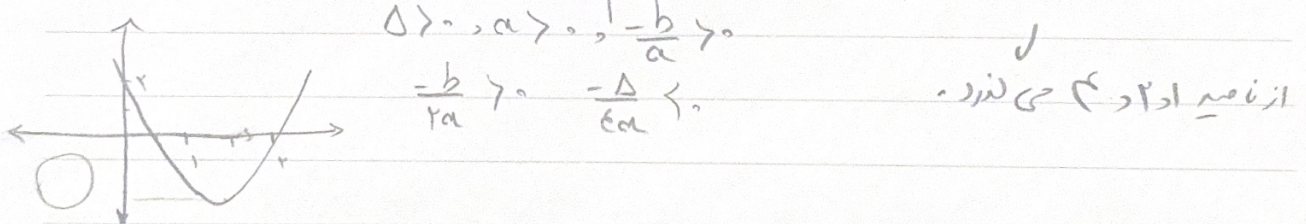


ب)  $y = -x^2 + 5x$   $\rightarrow$  از ریشه دوم

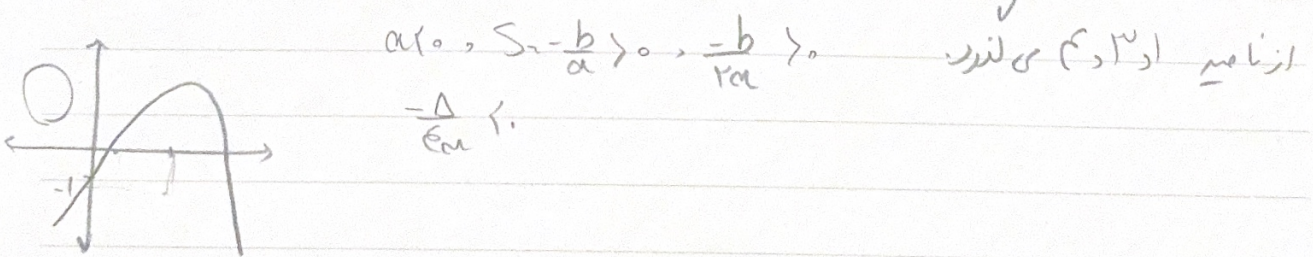


الف)  $y = 2x^2 - 5x + 2$   $\Delta > 0, a > 0, S = \frac{1}{2}, \frac{1}{4}$

۲



ب)  $y = -x^2 + (m-1)x + 2 + \sqrt{3}$



$x^2 - x - 3 = 0$  ۳

الف)  $\frac{\alpha + \beta}{\alpha - \beta} = \frac{-b}{\frac{\sqrt{\Delta}}{2a}} = \frac{1}{\sqrt{13}} = \frac{\sqrt{13}}{13}$

$$1) \alpha^r + \beta^r \cdot 5^r - r p = 1 - (-a) = \sqrt{v}$$

$$2) \alpha^r + \beta^r \cdot 5^r - r p = 1 - r(-r) = 10$$

$$3) \alpha^r - \beta^r \cdot (\alpha - \beta)(\alpha^r + \beta^r + \alpha\beta) = (\sqrt{1r})(v - r) = \sqrt{1r}$$

$$y = (n - r)(n^r - an + a)$$

(c)

$$\left[ \begin{array}{l} & \frac{0 \cdot e}{1-1+1} \\ & \end{array} \right]$$

$$\text{مور } \Rightarrow \text{ 1) } \Delta K_0 \Rightarrow \alpha^r - \alpha a K_0 \quad \rightarrow \text{ 2) } \text{ 2) } (0 > e)$$

$$\text{2) } \Rightarrow \frac{r \cdot r \cdot r}{\alpha} = r - r a + a r_0 \Rightarrow a r_0$$

$$\text{1) } \cup \text{ 2) } = (0 > r)$$

$$r \alpha^r + \beta^r - r a = v$$

$$r n^r - r n a = v \quad (d)$$

$$\alpha + \beta = e \Rightarrow \beta = e - \alpha$$

$$r \alpha^r + (e - \alpha)^r - r a = v \Rightarrow r \alpha^r - 1 r \alpha + 9 r_0 = 1 \alpha^r - r a + r_0 \quad \left[ \begin{array}{l} \alpha > 1 \\ \alpha < 1 \end{array} \right]$$

$$(\alpha - 1)(\alpha - r) = 0 \quad \left[ \begin{array}{l} \alpha > 1 \\ \alpha < 1 \end{array} \right]$$

$$\frac{d \beta^r}{d \alpha} \Rightarrow \alpha = -9$$

$$\beta = e - \alpha = 9 + e$$

رتبه مقدار  $a = -r$  برابر  $r$  است.

کوتاه است

(4)

$$h = \frac{(ra + r) + (v - ra)}{r} = \frac{v + r}{r} \Rightarrow b = a$$

$$h = (a, r)$$

$$\left. \begin{array}{l} v - ra > 0 \\ a < r \end{array} \right\} \Rightarrow a = r$$

dh

$$A(9,1) \Rightarrow y_2 = p(n-d)^r + r$$

$$1 = p(9-d)^r + r \Rightarrow 14p + r = 1 \Rightarrow p = \frac{1-r}{14}$$

$$y_0 = p(0-d)^r + r = \frac{-rd}{1} + \frac{r}{1} = -\frac{r}{1} \quad n_{20} \leftarrow y_{20} \text{ با } r \text{ همبند}$$

$$\text{با } n_{20} \Rightarrow |y_0| = \left| -\frac{r}{1} \right| = \boxed{\frac{1}{14}}$$

$$\downarrow \quad \alpha_2 = 1 - \beta \leftarrow \alpha + \beta = 1 \text{ (مجموع به هم مساوی است)} \quad (N)$$

$$C_0 \beta^r + r_0(1-\beta)^r - r_0 \beta = 1V$$

$$C_0 \beta^r + r_0 + r_0 \beta^r - C_0 \beta^r - r_0 \beta = 1V \Rightarrow 40\beta^r - 40\beta + r_0 = 1V \Rightarrow 40\beta^r - 40\beta + r_0 = 1V$$

$$\hookrightarrow \beta = \frac{d \pm \sqrt{d^2 - 4r_0}}{2d} \Rightarrow \alpha = \frac{d \mp \sqrt{d^2 - 4r_0}}{2d} \Rightarrow \alpha \beta = \frac{(d - \sqrt{d^2 - 4r_0})(d + \sqrt{d^2 - 4r_0})}{4d^2} = \frac{1}{r_0}$$

$$\text{با } n_{20} \text{ همبند} \Rightarrow (\alpha - \beta)^r (\alpha + \beta)^r - C_0 \alpha \beta = 1 - \frac{r}{r_0} = \frac{r}{d} \Rightarrow |\alpha - \beta| = \frac{\sqrt{d^2 - 4r_0}}{2d}$$

(A)

$$n_{20} \text{ با } n_{20} \text{ همبند} \Rightarrow n_{20} = \frac{1-d}{r} = -r \Rightarrow n_{20} = -r$$

$$y_2 = a(n+r)^r - \frac{1}{r} \Rightarrow \frac{r}{r} = C_0 - \frac{1}{r} \Rightarrow C_0 = \frac{1}{r} \Rightarrow \alpha = \frac{1}{r}$$

$$n_{20} \Rightarrow y_2 = \frac{1}{r} (1+r)^r - \frac{1}{r} = \frac{1+r-1}{r} = 1 \Rightarrow \boxed{C_0 = \beta}$$

$$\sqrt{d+\beta} = \frac{-b}{a} \quad d+\beta = -4 \rightarrow \text{...} \quad d = \beta - 4 \quad = d < \beta < 0 \quad (9)$$

$$\sqrt{\beta} = d - 4 \Rightarrow \beta = \frac{d-4}{\sqrt{\beta}} \Rightarrow \sqrt{\beta} = \frac{d-4}{\sqrt{\beta}} \Rightarrow d = \frac{-4-d}{\sqrt{\beta}}$$

$$\sqrt{\alpha^2 + \beta^2} = \sqrt{\frac{(d+4)^2}{\epsilon} + \frac{(d-4)^2}{\epsilon}} = \frac{2d^2 + 16}{\epsilon}$$

$$\frac{d}{\epsilon} d^2 + 16d + 16 = \dots = 140 + 12\sqrt{2} \dots$$

$$2d^2 + 16d - (140 + 12\sqrt{2}) = 0$$

$$\hookrightarrow d = \frac{-(16 \pm \sqrt{16^2 - 4 \cdot 2 \cdot (-140 - 12\sqrt{2})})}{2 \cdot 2} = \frac{-16 \pm \sqrt{256 - 1120 - 48\sqrt{2}}}{4}$$

$$d = \sqrt{2} \Rightarrow \alpha = \frac{-4 - \sqrt{2}}{\sqrt{2}} = -(1 + \sqrt{2}) \quad (\sqrt{2} + \frac{4}{\alpha})^2$$

$$\beta = -1 + \sqrt{2} \quad \hookrightarrow \alpha \alpha \beta = \frac{1}{\sqrt{2}} \quad (-1 - \sqrt{2})(-1 + \sqrt{2}) = 1 - 2 = -1$$

$$\frac{1}{\sqrt{\alpha}} + \frac{1}{\sqrt{\beta}} = 0 \Rightarrow \alpha \beta = \frac{0}{\alpha} = \frac{1}{\sqrt{4}} \Rightarrow \frac{1}{\sqrt{\alpha\beta}} = 4$$

$$\sqrt{\left(\frac{1}{\sqrt{\alpha}} + \frac{1}{\sqrt{\beta}}\right)^2} = \sqrt{\left(\frac{1}{\alpha} + \frac{1}{\beta}\right) + 12} = \sqrt{12} \Rightarrow \frac{1}{\alpha} + \frac{1}{\beta} = 12 - \frac{\alpha + \beta}{\alpha\beta}$$

$$12 - \frac{\alpha + \beta}{\alpha\beta} = 12 \Rightarrow \frac{\alpha + \beta}{\alpha\beta} = 0 \Rightarrow \frac{m+1}{m} = 0 \Rightarrow m = -1$$

$$m = -1 \quad m \alpha^2 + m \alpha + 1 = 0 \Rightarrow -\alpha^2 - \alpha + 1 = 0 \Rightarrow \alpha = \frac{1 \pm \sqrt{5}}{2} \quad \boxed{-1}$$