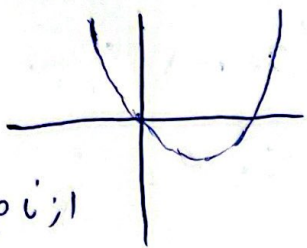


الف)  $y = 2x^2 - 2x$

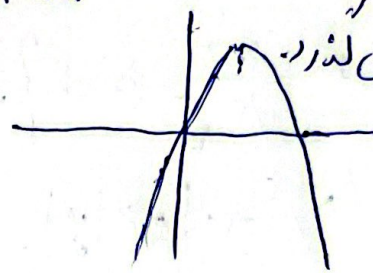
ext |  $\frac{1}{2}$   
|  $-\frac{1}{2}$



از انصاف معنی گذرد.

ب)  $y = -x^2 + 4x$

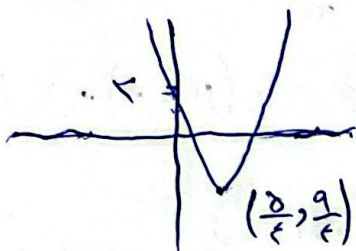
ext |  $2$   
|  $4$



از انصاف معنی گذرد.

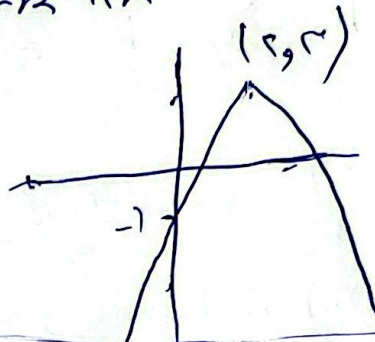
الف)  $y = 2x^2 - 2x + 2$

ext |  $\frac{5}{2}$   
|  $-\frac{1}{2}$



ب)  $y = -x^2 + 4x - 1$

ext |  $3$   
|  $4$



$2x^2 - 2x - 2 = 0$  الف)  $\frac{a+\beta}{a-\beta} = \frac{1}{\sqrt{13}} = \frac{\sqrt{13}}{13}$

$a + \beta = 1 = \frac{-b}{a}$   
 $a\beta = \frac{c}{a} = -2$

ب)  $a^2 + \beta^2 = S^2 - 2P = 1 - (-4) = 5$

ج)  $a^2 + \beta^2 = S^2 - 2SP = 1 - 2(-2) = 5$

$|a - \beta| = \frac{\sqrt{13}}{1}$

د)  $a^2 - \beta^2 = (a - \beta)(a^2 + \beta^2 + a\beta) \rightarrow (\sqrt{13})(1 + 2) = 3\sqrt{13}$

$y = (x - 2)(2x^2 - ax + a)$

$x = 2 \rightarrow \dots \rightarrow x^2 - ax + a$   $0 < a < 4$

$\Delta < 0 \rightarrow a^2 - 4a < 0 \Rightarrow a(4 - a) < 0 \rightarrow a = (0, 4)$

$2x^2 - 2x - a = 0$

$2x^2 + \beta^2 - 4a = 5$

$\rightarrow x^2 - x = \frac{a}{2}$

$x^2 - 4x + 4x + \beta^2 - 5 = 0$

$\Rightarrow \frac{a}{2} + 4 - \frac{4a}{2} - 5 = 0$

$\rightarrow a^2 - 4a = \frac{a}{2}$

$\rightarrow a - \frac{a}{2} = 0 \rightarrow 2a - a = 0 \rightarrow a = 2$

$a^2 + \beta^2 = S^2 - 2P \rightarrow 4 = 4 - 2P$

$S = 2$   
 $P = \frac{a}{2}$

$\frac{2}{2 + \sqrt{13}} = -4 + 2\sqrt{13}$

$$\begin{cases} \sqrt{-2a} > 0 \rightarrow c, d > a \\ a - \sqrt{-2a} > 0 \rightarrow a > r \end{cases} \implies a < N \implies a > r$$

$$\left. \begin{matrix} B(1, 1) \\ A(a, 1) \end{matrix} \right\} \begin{matrix} r = \frac{1+r}{2} = d = b \\ \rightarrow y^r = r \end{matrix} \left. \vphantom{\begin{matrix} B \\ A \end{matrix}} \right\} \text{ext} / \begin{matrix} d \\ r \end{matrix}$$

$$|y| = \left| -\frac{1}{\lambda} (a)^r + r \right| \rightarrow |y| = \left| \frac{1}{\lambda} \right| = \frac{1}{\lambda}$$

$$\begin{aligned} 0 &= -\frac{1}{\lambda} (r-d)^r + r \\ &\rightarrow \left| \frac{d \pm r\sqrt{4}}{\lambda} \right| \\ y &= a(r-h)^r + k \\ &\rightarrow y = a(r-d)^r + r \\ | &= 4a + r \rightarrow a = -\frac{1}{\lambda} \end{aligned}$$

$$\begin{aligned} a r^r - a r - b &= 0 \rightarrow a + \beta = 1 & \alpha^r + \beta^r &= 1 + \frac{r b}{a} \\ \rightarrow \alpha \beta^r - \alpha \beta &= b & \alpha \beta &= \frac{-b}{a} \\ \rightarrow \beta^r - \beta &= \frac{b}{a} \end{aligned}$$

$$r_0 \beta^r + r_0 \alpha^r - r_0 \beta = r_0 (\beta^r - \beta) + r_0 (\alpha^r + \beta^r)$$

$$= \frac{r_0 b}{a} + r_0 + \frac{r_0 b}{a} = W \rightarrow \frac{4 \cdot b}{a} = -\frac{r_0}{a} \rightarrow r_0 \cdot b = -a$$

$$\rightarrow -r_0 \cdot b r^r + r_0 b r - b = 0 \Rightarrow -b (r_0 r^r - r_0 r + 1) = 0 \Rightarrow \alpha - \beta = \frac{\sqrt{\Delta}}{|\alpha|} = \frac{\sqrt{r_0 - 10}}{r_0}$$

$$r r = \frac{1-d}{r} = -r \quad y = a(r-h)^r + k \rightarrow y = a(r+r)^r - \frac{1}{r}$$

$$y = -\frac{1}{r} \rightarrow \frac{r}{r} = a(r)^r - \frac{1}{r} \rightarrow a = \frac{1}{r} \quad \beta = \frac{1}{r} (r)^r - \frac{1}{r} = \textcircled{6}$$

$$r^r + 4r + a = 0 \quad \alpha + \beta = -4 \rightarrow \beta = (a+4) \quad \alpha \beta = a \quad .(9)$$

$$\Rightarrow r^r = -4r - a \quad r_0 \alpha^r + r_0 \beta^r = a^r + r (\alpha^r + \beta^r) = r - (a - 4a - a) = 1 a + 1 r \sqrt{r}$$

$$\rightarrow a^r = -4 - a \quad \rightarrow 1r + 1r\sqrt{r} = -da - 4a = -2a\sqrt{r} - 4a = 2a^r + r_0 a$$

$$\rightarrow da^r + r_0 a - 1r - 1r\sqrt{r} = 0 \rightarrow a = -r - r\sqrt{r} \rightarrow \beta = -r + r\sqrt{r}$$

$$a = \alpha \beta = (-r - r\sqrt{r})(-r + r\sqrt{r}) = \textcircled{11}$$

$$\frac{1}{\sqrt{\alpha}} + \frac{1}{\sqrt{\beta}} = \frac{\sqrt{\alpha} + \sqrt{\beta}}{\sqrt{\alpha\beta}} = d \Rightarrow \frac{d}{4} = \sqrt{\alpha} + \sqrt{\beta} \rightarrow \frac{r d}{4} = \alpha + \beta + \frac{r\sqrt{\alpha\beta}}{4} \quad |10$$

$$\Rightarrow \alpha + \beta = \frac{1r}{4} \quad r_0 r^r - (m+1r)r + 1 = 0 \quad \alpha \beta = \frac{1}{r_0} \quad \alpha + \beta = \frac{m+1r}{r_0}$$

$$m+1r = 1r \Rightarrow m = -1 \quad -r^r + r + 1 = 0 \rightarrow \alpha \beta = \frac{r}{-1} = \textcircled{-r}$$