

$$S = \alpha + \beta = \frac{V}{\alpha} \quad \frac{1}{\alpha} + \frac{1}{\beta} = ? \text{ a jola } \alpha \text{ و } \beta \text{ : } \alpha n^2 - Vn + 9\beta = 0$$

$$P = \alpha\beta = \frac{9}{\alpha} \rightarrow \alpha\beta = 9\beta \quad \beta > 0 \rightarrow \alpha = 9 \quad \alpha = \pm 3$$

$$\alpha = +3 \rightarrow 3 + \beta = \frac{V}{3} \quad \beta = \frac{V}{3} \quad \alpha \text{ و } \beta \text{ ع$$

$$\alpha = -3 \rightarrow -3 + \beta = \frac{V}{-3} \quad \beta = \frac{V}{-3} \quad \boxed{\beta = \frac{V}{-3}}$$

$$\frac{1}{\alpha} + \frac{1}{\beta} = \frac{1}{3} + \frac{1}{-3} = \left(\frac{V}{9}\right)$$

$$S = \frac{-b}{a} = -m \quad ? \text{ نازل } \alpha^2 - m\beta = \Lambda \quad n^2 + mn - 2m = 0$$

$$2m - m\alpha - m\beta = \Lambda$$

$$\alpha^2 = 2m - m\alpha$$

$$2m - m(\alpha + \beta) = \Lambda$$

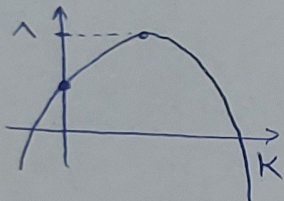
$$m\beta = 2m - \beta^2$$

$$m^2 + 2m - \Lambda = 0$$

$$(m+2)(m-2) = 0 \rightarrow m = -2 \text{ or } m = 2$$

$$m = -2 \rightarrow n^2 - 2n + \Lambda = 0 \quad \Delta < 0 \quad \text{ممنوع}$$

$$m = 2 \rightarrow n^2 + 2n - 4 = 0 \rightarrow S = \frac{-b}{a} = \frac{-2}{1} = -2$$



نازل و مثبت

$$f(n) = mn^2 + 2m + \frac{m}{2} + V$$

$$\frac{-\Delta}{4a} = \frac{-(14 - 4m)(\frac{m}{2} + V)}{4m} = \frac{2m^2 + 2\Lambda m - 14}{4m} = \Lambda$$

$$2m^2 + 2\Lambda m - 14 = 4m\Lambda$$

$$2m^2 - 4m - 14 = 0$$

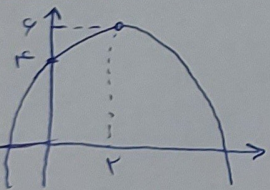
$$m^2 - 2m - 7 = 0$$

$$(m-4)(m+2) = 0 \rightarrow m = 4 \text{ or } m = -2 \rightarrow -2m^2 + 4m + 4 = 0$$

$$m = 4 \text{ or } m = -2$$

$$-2(m-4)(m+2) = 0$$

$$K = n = +4$$



$$y = a(n-2)^2 + 4 \rightarrow n=0 \quad 4a+4=4$$

$$a = \frac{-1}{1} \quad ? \text{ نازل و مثبت}$$

$$\frac{1}{r}n^2 + 2m + 4 = 0$$

$$S = \frac{-b}{a} = \frac{-2}{\frac{1}{r}} = -2r$$

$$P = \frac{c}{a} = \frac{4}{\frac{1}{r}} = -4r$$

$$\frac{1}{\alpha} + \frac{1}{\beta} = \frac{S}{P} = \frac{-2r}{-4r} = \frac{-1}{2}$$

$$n^2 - (2a+4)n + (4a^2+4a+4) = 0 \quad n=2 \rightarrow 4 - 2a - 4 + 4a^2 + 4a + 4 = 4a^2 - 2a - 1 = 0 \rightarrow a = 1$$

$\Delta > 0$

$$16a^2 + 16 + 4a - 4(4a^2 + 4a + 4) = 0$$

$$a^2 + 2a + 1 > 0 \quad (a+1)^2 > 0 \rightarrow a \neq -1$$

$$a = 1 \rightarrow n^2 - 6n + 12 = 0$$

$$(n-4)(n-2) = 0 \rightarrow \boxed{n=4}$$

$$a = \frac{1}{r} \rightarrow n^2 - \frac{1}{r}n + \frac{4}{r} = 0$$

$$P = \frac{c}{a} = 4 \times n \rightarrow \boxed{n = \frac{r}{4}}$$

(تالیف ۱۳)
 $y = (a-1)x^2 + x + 3$

(فاصله شکاری) ۲۰
 این یک از این ها معادله روبه رو نیست $n=2$ معادله باشد این معادله
 و باید کدام طرف مثبت قطع می کند؟

$\frac{-b}{2a} = \frac{-1}{2a-2} = 2$
 $-1 = 4a - 2$
 $3 = 4a$
 $\frac{3}{4} = a$

$y = \frac{1}{4}x^2 + x + 3 = 0$
 $-1 \pm \sqrt{1 - 4(\frac{1}{4})(3)}$
 $\frac{-1 \pm 2}{\frac{1}{2}} = -2$
 $\frac{-1 - 2}{\frac{1}{2}} = (+9)$

1

5

$f(m) = mx^2 - 2x + m$

x	x_1	x_2
$f(m)$	-	+

$m < 0$
 $\Delta > 0 \rightarrow 4 - 4m^2 > 0$
 $\frac{4}{m} > m^2$
 $\frac{4}{m} > m > -\frac{4}{m}$
 $-\frac{4}{m} < m < \frac{4}{m}$

2

5

معادله دوم که ریشه هایش $\frac{3+\sqrt{5}}{2}$, $\frac{3-\sqrt{5}}{2}$ باشد؟

$S = \alpha + \beta = \frac{3-\sqrt{5}}{2} + \frac{3+\sqrt{5}}{2} = \frac{6}{2} = 3$
 $P = \alpha\beta = (\frac{3-\sqrt{5}}{2})(\frac{3+\sqrt{5}}{2}) = \frac{9-5}{4} = \frac{4}{4} = 1$

$x^2 - 5x + P = 0 \rightarrow x^2 - 3x + 1 = 0$

3

5

$14x - m - 2$ معادله m $\alpha^2 + \beta^2 = 12$, $\alpha < \beta$

$2\alpha^2 + (\alpha + \beta)^2 = 12$
 $19 - (m+2)$

$14\alpha - m - 2 + 19 - m - 2 = 12$
 $14\alpha = 2m$
 $7\alpha = m$

$\alpha\beta = \frac{m+2}{2} = \frac{7\alpha+2}{2}$
 $\beta = \frac{7\alpha+2}{2\alpha}$
 $\alpha + \beta = \frac{7\alpha+2 + 7\alpha+2}{2\alpha} = 7$

$2\alpha^2 - 7\alpha + 2 = 0$ $\beta = 7$
 $2(\alpha-1)^2 = 0$ $\alpha = 1$ **$m = 7$**

5

4

معادله دوم که ریشه هایش $\frac{3+\sqrt{5}}{2}$, $\frac{3-\sqrt{5}}{2}$ باشد؟

$y = a(x-2)^2 + 9$ $\rightarrow$ $a(0-2)^2 + 9 = 5$
 $4a + 9 = 5$
 $4a = -4$ $a = -1$

$y = -x^2 + 4x + 5 = 0$
 $y = -(x-0)(x+1) > 0$
 $(x-0)(x+1) < 0$

-1 $+5$

+	-	+
---	---	---

$-1 < x < +5$

5

5