

$y = (a-1)x^2 + x + 3$ $\frac{-b}{2a} = \frac{-1}{2a-2} = 2 \rightarrow 4a - 2 = -1$
 $x_0 = 2$ (مورد تکرار) $4a = 3$
 $a = \frac{3}{4}$
 (ریشه‌ها را از هم جدا می‌خواهد) $\rightarrow y = 0$
 $\xrightarrow{\text{بازنویسی}} -\frac{1}{4}x^2 + x + 3 = y \xrightarrow{\times (-4)} x^2 - 4x - 12$
 $(x-6)(x+2)$
 $x = 6, -2$

$f(x) = mx^2 - \Delta x + m$ (II) $m < 0$
 $x_1 \quad x_2$
 $- \quad + \quad -$
 $(II, I) \rightarrow -\frac{\Delta}{r} < m < 0$
 $I) \Delta > 0 \rightarrow 2a - 4m^2 > 0 \rightarrow 2a > 4m^2 \rightarrow \frac{2a}{4} > m^2 \rightarrow |m| < \frac{\Delta}{r} \rightarrow -\frac{\Delta}{r} < m < \frac{\Delta}{r}$

$\frac{3-\sqrt{\Delta}}{3}, \frac{3+\sqrt{\Delta}}{3}$

$S = \alpha + \beta = 2$
 $P = \frac{9-\Delta}{9} = \frac{4}{9}$
 $x^2 - Sn + P = x^2 - 2n + \frac{4}{9} = y \Rightarrow 9x^2 - 18n + 4 = y$
 (نصفه ضرایب صحیح)

$2x^2 - 18x + m + 4 = 0$
 $\alpha < \beta$
 $4\alpha^2 + \beta^2 = 12 \rightarrow \alpha = 1, \beta = 3$
 $4 + 9 = 12$
 $m = 4$

$S(2, 9)$ $y = a(x-2)^2 + 9$ $4a + 9 = \Delta \rightarrow a = -1$ $\xrightarrow{\text{بازنویسی}} -(x-2)^2 + 9 = y$
 $-x^2 + 4x - 4 + 9 = y \Rightarrow -x^2 + 4x + 5 = y$
 $\frac{-b}{2a} = \frac{-4}{-2} = 2$
 $-4 + 8 + 5 = 9$
 $x^2 - 4x - 5$
 $(x-5)(x+1)$
 طبق شکل $(-1, 5)$

$$\alpha n^2 - 7n + 9\beta = 0$$

$$\beta \rightarrow \text{عدد صحیح}$$

$$\frac{1}{\alpha} + \frac{1}{\beta} = ?$$

$$S = \frac{V}{\alpha}$$

$$P = \frac{9\beta}{\alpha}$$

(α, β) یار صفت کنه

$$\alpha\beta = \frac{9\beta}{\alpha} \rightarrow \alpha^2 = 9$$

$$\alpha = \pm 3$$

$$\frac{1}{\alpha} + \frac{1}{\beta} = -\frac{1}{3} + \frac{3}{2} = \frac{5}{6}$$

$$\alpha\beta^2 - 7\beta + 9\beta = 0$$

$$\beta(\alpha\beta - 7 + 9) = 0$$

$$\alpha\beta = -2$$

$$(\alpha = -3)(\beta = \frac{2}{3})$$

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$$x^2 + mx - 2m = 0$$

$$S = -m$$

$$P = -2m$$

$$m = -\epsilon, 2 \rightarrow \Delta \cdot \checkmark$$

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

$$m^2 + 2m - 8 = 0$$

$$S = -m$$

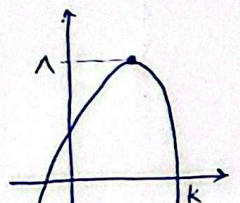
$$P = -2m$$

$$\alpha^2 - m\beta \text{ (مقادیر حقیقی): } \alpha^2 + 5\beta = \alpha^2 + \alpha\beta + \beta^2 - (\alpha^2 + \beta^2) + \alpha\beta = S^2 - 2P + P = (S^2 - P = 1)$$

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$$f(x) = mx^2 + \epsilon x + \frac{m}{r} + 7 \quad \Delta = 14 - 2m^2 - 28m$$



$$\frac{-\Delta}{4a} = 1 \rightarrow \frac{2m^2 + 28m - 14}{4m} = \frac{m^2 + 14m - 7}{2m} = 1 \rightarrow 14m = m^2 + 14m - 7$$

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

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

$$m = 4, -2$$

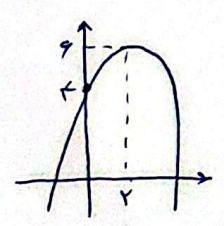
$$x^2 + \epsilon x + 9 \Rightarrow x^2 + 2x + 3$$

$$x^2 - 2x - 3 \Rightarrow (x-3)(x+1)$$

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$$\frac{1}{\alpha} + \frac{1}{\beta} = ? \rightarrow \frac{\alpha + \beta}{\alpha\beta} = \frac{4}{-1} = -\frac{1}{2}$$



$$a = -\frac{1}{r}$$

$$\epsilon a = -2$$

$$4a + 4 = \epsilon$$

$$\alpha\beta = -1$$

$$\alpha + \beta = 4$$

$$\Rightarrow x^2 - \epsilon x - 1 = 0$$

$$-\frac{1}{r}(x^2 - \epsilon x + 4) + 4 = 0$$

$$-\frac{1}{r}(x^2 - \epsilon x + 4) + 4 = 0 \Rightarrow x^2 - \epsilon x + 4 - 4r = 0$$

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$$x^2 - (4a + \epsilon)x + (4a^2 + 4a + 4)$$

الگوی از این هاست 2 بار به آن یکی چند است؟

$$4 - 14a - 14 + 3a^2 + 9a + 3 = 0$$

$$3a^2 - 10a - 11 = 0$$

$$a^2 - 2a - 3 = 0$$

$$(a-3)(a+1) \rightarrow \frac{3}{3}, -\frac{1}{3} \rightarrow -\frac{1}{3}$$

$$\alpha = -\frac{1}{3} \rightarrow x \left\{ \frac{2}{3}, \frac{4}{3} \right\}$$

$$10a : x^2 - 14x + 12$$

$$(x-2)(x-6)$$

$$x = 2, 6$$

1, 15

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