

کار مینا کبیری
گروه دهم تجربی

$$y = a(x+1)^2 + 9 \xrightarrow{(5,1)} 14a + 9 = 1$$

$$a = -\frac{1}{2}$$

$$y = -\frac{1}{2}(x+1)^2 + 9 = \boxed{-\frac{1}{2}x^2 - x + \frac{17}{2}}$$

①

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$$\Delta > 0 \rightarrow m^2 - 1(m+4) > 0 \rightarrow m^2 - 1m - 4 > 0$$

$$(m-12)(m+4) > 0$$

$$\begin{array}{r} -4 \quad 12 \\ + \quad - \quad + \end{array}$$

②

$$S > 0 \rightarrow \frac{-m}{2} > 0 \rightarrow m < 0$$

$$P > 0 \rightarrow \frac{m+4}{2} > 0 \rightarrow m > -4$$

اشتراک $\rightarrow$ $\boxed{m: (-4, 0)}$

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$$S = \frac{1}{p} \rightarrow \alpha + \beta = \frac{1}{\alpha\beta} \rightarrow \frac{-r_m + 1}{r} = \frac{r}{r-m}$$

$$(r-m)(1-rm) = r \rightarrow rm^2 - rm + r = r$$

$$rm^2 - rm - r = 0 \rightarrow (m+1)(rm-r) = 0$$

$$m = -1 \rightarrow rm^2 - rm + r = 0 \rightarrow \Delta < 0 \quad \text{غیر حقیقی}$$

$$\rightarrow \boxed{m = \frac{r}{r}} \rightarrow rm^2 + rm - \frac{r}{r} = 0 \quad \Delta > 0 \quad \checkmark$$

$$x^2 - n - 8 = 0 \quad x_1^2 + x_2^2 + \frac{1}{x_1} + \frac{1}{x_2} = \dots \quad (4)$$

$$= (x_1 + x_2)^2 - 2x_1x_2 + \frac{x_1 + x_2}{x_1x_2}$$

$$= 1 - (-12) + \frac{-1}{-1} = \frac{13}{1}$$

$$(x_1^2 + \frac{1}{x_1})(x_2^2 + \frac{1}{x_2}) = (x_1x_2)^2 + x_1^2 + x_2^2 + \frac{1}{x_1x_2}$$

$$= -4 + (1 - (-1)) + \frac{-1}{-1} = \frac{-21}{1}$$

$$y = x^2 - \frac{13}{1}x - \frac{21}{1}$$

$$\sqrt{n} = t \quad (t^2 + \frac{1}{t^2} + 1)(t^2 - 1) = 2t \rightarrow t^4 - 1 + 1 - \frac{1}{t^2} = t^4 - \frac{1}{t^2} = 2t \quad (5)$$

$$x t^2 \rightarrow t^4 - 1 = 2t^2 \rightarrow t^4 - 2t^2 - 1 = 0 \quad t^2 = \frac{2 \pm \sqrt{4}}{2} = 1 \pm \sqrt{2} \quad 10$$

$$t^2 = n \rightarrow n_1 + n_2 = 1 + \sqrt{2} + 1 - \sqrt{2} = 2$$

$$a \rightarrow \alpha, 3\alpha \rightarrow 3\alpha^2 = \frac{9}{4} \rightarrow \alpha^2 = \frac{9}{4} \rightarrow \alpha = \pm \frac{3}{2} \quad (6)$$

$$a = \frac{3}{2} \rightarrow a = (\frac{3}{2} + 2) \times 2 = n$$

$$a = -\frac{3}{2} \rightarrow a = (-\frac{3}{2} - 2) \times 2 = n$$

$$n - (-n) = 19$$

$$a > 0$$

$$\frac{-b}{a} > 0 \xrightarrow{a > 0} b < 0 \quad 3 + 2a < 0 \rightarrow 2a < -3 \rightarrow a < -\frac{3}{2}$$

$$\frac{-1}{-1} = 1 \rightarrow \phi$$

$$n = 19$$

$$y = x^2 + 2x - 2 = 1 \quad (7)$$

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

$$y = -(n-1)(n+3) + 1$$

$$= -n^2 - 2n + 4 \rightarrow b = 2 \quad |ab = n|$$

$$n = -3, n = 1$$

$$n^2 - \frac{1}{r}n - \frac{r}{a} = 0 \rightarrow \alpha + \beta = \frac{1}{r} \quad (9)$$

$$\left\{ \begin{array}{l} n^2 - \frac{a}{r}n + \frac{b}{r} = 0 \rightarrow \alpha + \beta + r \times \frac{1}{r} = \frac{a}{r} \rightarrow \frac{r}{r} = \frac{a}{r} \quad a = r \\ n^2 - \frac{1}{r}n - 1 = 0 \end{array} \right.$$

$$\left(\alpha + \frac{1}{r}\right)\left(\beta + \frac{1}{r}\right) = \alpha\beta + \frac{1}{r} + \frac{1}{r}(\alpha + \beta) = -\frac{1}{r} = \frac{b}{r} \rightarrow b = -1$$

$$\rightarrow \left[\frac{a \ b}{r} \right] = \left[\frac{-r}{r} \right] = -1 \quad 25$$

$$\alpha + \beta = -1$$

$$\alpha + \gamma = -1$$

$$\boxed{\gamma - \beta = 0}$$

ریشه مشترک: α
ریشه غیر مشترک: γ, β

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