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$$\frac{-b}{pa} = 2 \Rightarrow -b = 2a \Rightarrow -1 = 2(a-1) \Rightarrow -1 = 2a - 2 \Rightarrow 1 = 2a \Rightarrow a = \frac{1}{2}$$

$$y = -\frac{1}{2}x^2 + x + 3 \Rightarrow \Delta = 4 \rightarrow x_1 = \frac{-1 + \sqrt{4}}{-\frac{1}{2}} = \boxed{-2}$$

$$x_2 = \frac{-1 - \sqrt{4}}{-\frac{1}{2}} = \frac{-3}{-\frac{1}{2}} = \boxed{6} \leftarrow \text{جواب}$$

$$\boxed{x=6}$$

① $m < 0$ خارج درستی مطابق علامت است $a < m < 0$

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$$\Delta > 0 \leftarrow \text{درستی داریم} \Rightarrow 4 - 4m^2 > 0 \Rightarrow \frac{4}{4} > m^2 \Rightarrow \boxed{-\frac{1}{2} < m < \frac{1}{2}} \quad \text{②}$$

$$\text{جواب} \quad \text{①} \cap \text{②} \Rightarrow \boxed{-\frac{1}{2} < m < 0}$$

$$ax^2 + bx + c \Rightarrow ax^2 - 5x + 6 \Rightarrow \boxed{ax^2 - 2x + \frac{4}{9} = y}$$

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$$S = \frac{3 - \sqrt{5} + 3 + \sqrt{5}}{2} = \boxed{3}$$

$$P = \frac{(3 - \sqrt{5})(3 + \sqrt{5})}{4} = \boxed{\frac{4}{4}}$$

$$\alpha + \beta = 2 \Rightarrow \beta = 2 - \alpha$$

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

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$$3\alpha^2 + (2 - \alpha)^2 = 12 \Rightarrow 3\alpha^2 - 4\alpha + 4 = 0 \Rightarrow \alpha^2 - 2\alpha + 1 = 0 \Rightarrow (\alpha - 1)^2 = 0 \Rightarrow \boxed{\alpha = 1}$$

$$\boxed{\beta = 1}$$

$$\frac{m+2}{2} = (1)(1) \Rightarrow 4 = m+2 \Rightarrow \boxed{m=2} \text{ جواب}$$

$$\frac{-b}{pa} = 2 \Rightarrow \boxed{2a + b = 0} \quad \text{①}$$

$$\text{②, ①} \Rightarrow \boxed{a = -1} \quad \boxed{b = 2}$$

$$y = -x^2 + 2x + 5$$

$$S \mid \frac{4}{9} \Rightarrow 9 = 2a + 2b + \frac{4}{c} \Rightarrow \boxed{2 = 2a + 2b} \quad \text{③}$$

$$-x^2 + 2x + 5 > 0 \Rightarrow \frac{-1 \quad 5}{-2 \quad 5} \Rightarrow \boxed{x \in (-1, 5)} \text{ جواب}$$

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$$\frac{-1}{p} + \frac{q}{r} = \frac{v}{q}$$

$$\frac{1}{\alpha} + \frac{1}{\beta} = \frac{\alpha + \beta}{\alpha\beta} = \frac{5}{p} = \frac{\frac{v}{\alpha}}{\frac{q}{\beta}} = \frac{\sqrt{v}}{\frac{q}{\beta}} = \frac{v}{q} \times \frac{\beta}{p} = \frac{15}{2v} \text{ جواب}$$

① $\alpha^2 - v\alpha + q\beta = 0 \rightarrow \alpha(\alpha^2 - v\alpha - \frac{11}{\alpha^2}) = 0 \Rightarrow \alpha^2 - v\alpha - \frac{11}{\alpha^2} = 0$

② $\alpha\beta^2 + p\beta = 0 \Rightarrow \beta(\alpha\beta + p) = 0 \Rightarrow \alpha\beta = -p \Rightarrow \alpha = -\frac{p}{\beta}$

$\Rightarrow \alpha^2 = t \Rightarrow t^2 - vt - 11 = 0$

$t = -2 \times \frac{1}{2} = -1$

$t = 4 \Rightarrow \alpha = -\frac{p}{\beta} \Rightarrow \beta = -\frac{p}{\alpha} = -\frac{1}{4}$

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~~این سوال 1/2 هست~~

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$$\frac{-b}{ra} = -\frac{r}{m} \Rightarrow (\frac{5}{mr})m - \frac{1}{m} + \frac{m}{r} + v = 1 \Rightarrow \frac{m^2 + 15 - 1}{rm} = 1 \Rightarrow m^2 - 2m - 1 = 0$$

$$(m-2)(m+1) = 0$$

$m = -1$

$$y = -2x^2 + 5x + 6$$

$x_1 = -1$

$x_2 = 3 = k$

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$$\beta^2 - 2m = -m\beta \Rightarrow \alpha^2 + \beta^2 - 2m = 1 \Rightarrow 5^2 - 2p - 2m = 1 \Rightarrow$$

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

$m = -2$

$$m = -2 \rightarrow 0 = x^2 - 2x + 1 \Rightarrow \Delta < 0 \Rightarrow \text{No real roots}$$

$$m = 1 \rightarrow x^2 + 2x - 1 = 0 \Rightarrow \Delta > 0 \Rightarrow S = -2$$

این سوال 1/2 هست

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$$\frac{-b}{ra} = 2 \Rightarrow \begin{cases} a+b=0 \\ a+b=1 \end{cases}$$

$$y = 4 = \varepsilon a + 2b + \varepsilon \Rightarrow \begin{cases} a+b=0 \\ a+b=1 \end{cases}$$

$$\begin{cases} a = -\frac{1}{p} \\ b = 2 \end{cases}$$

$$\frac{\frac{1}{2-2\sqrt{3}} + \frac{1}{2+2\sqrt{3}}}{\frac{2+2\sqrt{3}+2-2\sqrt{3}}{2-12}} = \frac{-\frac{1}{2}}{1} = -\frac{1}{2}$$

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

$$\Delta = 2 - 2(-\frac{1}{2})(2) = 4$$

$x_1 = \frac{-2+2\sqrt{3}}{-1} = 2-2\sqrt{3}$

$x_2 = \frac{-2-2\sqrt{3}}{-1} = 2+2\sqrt{3}$

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$$\varepsilon - 2(a+\varepsilon) + (3a^2 + 4a + 2) = 0 \Rightarrow 3a^2 - 2a - 1 = 0 \Rightarrow a = 1$$

$$a = 1 \Rightarrow x^2 - 1x + 1 = (x-1)(x-1)$$

$$x = 1$$

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$$a = \frac{1}{p} \rightarrow 3a^2 - 1a + 2 \rightarrow \begin{cases} x = 1 \\ x = \frac{1}{p} \end{cases}$$