

$$x = \alpha(x+1)^2 + 9$$

جایگذاری (۳ و ۱)

$$\alpha(3+1)^2 + 9 = 1$$

$$16\alpha = -8$$

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

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

$$x = \frac{-x}{2} - x + \frac{17}{2}$$

$$\Delta > 0 \rightarrow m^2 - 12m - 14 > 0$$

$$P > 0 \rightarrow \frac{m+6}{2} > 0 \rightarrow m > -6$$

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

$$\begin{array}{ccc} -14 & & 12 \\ + & - & + \end{array}$$

$$\cap \rightarrow (-6, -4)$$

$$S = \frac{1}{p} \rightarrow \frac{-2m+1}{2} = \frac{2}{2-m} \rightarrow 2m^2 - 2m - 1 = 0$$

$$m \rightarrow \begin{cases} \frac{1}{2} \\ -1 \end{cases}$$

نی تونه باشه چون وقتی در معادله جایگذاری کنیم $\Delta < 0$ میشه. $x^2 - x + 1 = 0$

$$پس \quad m = \frac{1}{2}$$

$$x^2 - x - 14 = 0 \quad \begin{cases} p = -14 \\ S = 1 \end{cases}$$

$$p_0: \frac{S-2p}{x_1 x_2 + x_1^2 + x_2^2 + \frac{1}{x_1 x_2}} = \frac{-14+1+1+(-\frac{1}{14})}{\frac{-221}{14}} = \frac{21}{14}$$

$$x^2 - Sx + p = 0 \rightarrow S: \frac{S}{x_1 x_2 + x_1^2 + x_2^2 + \frac{1}{x_1 x_2}} = \frac{1+1+1+(-\frac{1}{14})}{\frac{-221}{14}} = \frac{51}{14}$$

$$x^2 - \frac{51}{14}x - \frac{221}{14} = 0 \xrightarrow{\times 14} 14x^2 - 51x - 221 = 0$$

$$14x^2 - 51x - 221 = 0$$

دو طرف معادله ضرب در $\sqrt[3]{x^3}$

$$(\sqrt[3]{x^3} + 1 + \sqrt[3]{x^3}) (\sqrt[3]{x^3} - 1) = 2x \quad (\text{فیل و فنچو})$$

$$x^2 - 1 = 2x \rightarrow x^2 - 2x - 1 = 0$$

$$S = \frac{-b}{a} = \boxed{2}$$

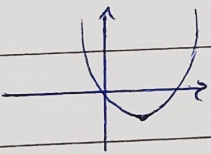
$$\alpha = 3\beta \rightarrow P = \frac{c}{a} = 3\beta^2 = \frac{r}{3} \rightarrow \begin{cases} B = \pm \frac{r}{3} \\ \alpha = \pm 2 \end{cases}$$

$$\textcircled{1} \text{ معادله} = ax - Sx + P \rightarrow 3x - 1x + \frac{r}{3} = 0$$

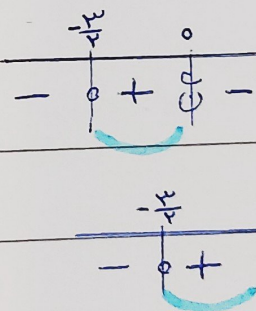
$$\Rightarrow \alpha = \pm 1$$

$$\textcircled{2} \text{ معادله} = ax - Sx + P \rightarrow 3x + 1x + \frac{r}{3} = 0$$

اختلاف 8: 19



$$\begin{cases} \boxed{\alpha > 0} \\ S > 0 \rightarrow \frac{-3-2\alpha}{\alpha} > 0 \\ P = 0 \\ \blacktriangle \lambda > 0 \rightarrow 12\alpha^2 + 12\alpha + 9 > 0 \end{cases}$$



$$\frac{\text{کشتی}}{7} \rightarrow \boxed{(0, +\infty)}$$

$$2x = -\frac{b}{1a} \Rightarrow \frac{-a}{1} = \frac{1}{-1} \rightarrow a = 1$$

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(1)

$$① \text{ Given } 1 = x^2 + 2x - 1 \Rightarrow x^2 + 2x - 1 = 0 \quad x \begin{matrix} \rightarrow 1 \\ \rightarrow -1 \end{matrix}$$

$$② \text{ Given } \begin{cases} x=1 \rightarrow 1 = -1 - 1 + b \rightarrow \boxed{b=1} \checkmark \\ x=-1 \rightarrow 1 = -1 + 1 + b \rightarrow \boxed{b=1} \checkmark \end{cases}$$

$$ab = 1 \times 1 = 1$$

$$① \quad 2ax^2 + ax - 5 = 0 \rightarrow \begin{matrix} \alpha \\ \beta \end{matrix} \rightarrow S = -\frac{1}{2} = \alpha + \beta$$

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$$② \quad 2x^2 - ax + b = 0 \rightarrow \begin{matrix} \alpha + \frac{1}{2} \\ \beta + \frac{1}{2} \end{matrix} \rightarrow S = \alpha + \beta + 1 = \frac{1}{2}$$

$$\div 2 \quad x^2 - \frac{ax}{2} + \frac{b}{2} = 0$$

$$x^2 - Sx + P = 0 \rightarrow S = \frac{1}{2} = -\frac{a}{2} \rightarrow \boxed{a = -1}$$

$$\frac{c}{a} = \frac{b}{2} = \frac{5}{2} \rightarrow \boxed{b=5} \rightarrow \left[\frac{-5}{2} \right] = \boxed{-2.5}$$

$$x^2 + 2x - 1m = x^2 + 2x + m \rightarrow -1x = 1m \rightarrow m = -x$$

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(10)

$$x^2 + 2x - x = x^2 + 2x = 0 \quad x \rightarrow 0 \text{ or } x \rightarrow -2$$

$$x^2 + 2x + a = 0 \quad \begin{matrix} x=1 \\ x=-2 \end{matrix} \checkmark$$

$$\rightarrow \boxed{m=a}$$

$$x^2 + 2x - 1a = 0 \quad \begin{matrix} x=-2 \\ x=1 \end{matrix} \checkmark$$

$$\rightarrow \boxed{14} = \text{اختلاف}$$