

$$q = +9 - b + c$$

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

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النا بدخواه (د صبر جگر ها)

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$$1 = 9a + 3b + c$$

$$\begin{cases} 9 = 14a + c \\ 1 = 9a + 3b + c \end{cases}$$

$$\rightarrow -1 = 14a \rightarrow a = -\frac{1}{14}$$

$$\rightarrow b = -1$$

$$\rightarrow c = 9 - \frac{1}{14} + 1 = \frac{127}{14}$$

$$-a + c = 9 \rightarrow c = 9 - \frac{1}{14} + 1 = \frac{127}{14}$$

$$-\frac{1}{14}x^2 - x + \frac{127}{14}$$

$$\Delta > 0 \text{ و } p > 0 \text{ و } s > 0 \Rightarrow \frac{-b}{a} > 0 \rightarrow \frac{-m}{r} > 0 \rightarrow +m < 0$$

$$\frac{c}{a} > 0 \rightarrow \frac{m+f}{r} > 0 \rightarrow m > -f \text{ و } b^2 - 4ac \Rightarrow m^2 - f(r)(m+f) = m^2 - 1(m-f) > 0$$

$$(m-1)(m+f) > 0 \rightarrow \begin{array}{c|c|c} -f & +f \\ \hline + & - & + \end{array} \rightarrow m > 1 \text{ و } m < -f \rightarrow -f < m < -f \text{ (اشتراک شرط ها)} \rightarrow -f < m < -f \text{ (بصورت بازه)}$$

$$\alpha + \beta = \frac{1}{\alpha\beta} \rightarrow \alpha + \beta = \frac{-b}{a} = \frac{+1-2m}{r} \text{ و } \alpha\beta = \frac{c}{a} \rightarrow \frac{r-m}{r}$$

$$\frac{1-2m}{r} = \frac{r}{r-m} \rightarrow (r-m)(1-2m) = r \rightarrow rm^2 - 3m + r = r \rightarrow rm^2 - 3m - r = 0$$

$$\rightarrow c+a=b \rightarrow \begin{cases} x_1 = -1 \\ x_2 = \frac{-c}{a} = \frac{+r}{r} \end{cases} \rightarrow \Delta > 0 \rightarrow -1 = 9 - 14 = -5 \text{ و } \frac{r}{r} = 1 \text{ و } (r-m-1)^2 - f(r-m) \times r > 0 \rightarrow \frac{r}{r} = 1 \text{ و } 14 - 9 = 5 \text{ و } 14 - 9 = 5 \text{ و } 14 - 9 = 5$$

$$x^2 - x - f = 0 \rightarrow s = 1 \text{ و } p = -f$$

$$\alpha + \beta = (x_1 + x_2)^r - r x_1 x_2 \times (x_1 + x_2) + \frac{x_1 + x_2}{x_1 x_2} = (1)^r - r(-f) \times 1 + (-\frac{1}{f}) = \frac{51}{f}$$

$$\alpha \times \beta = (x_1 \times x_2)^r + (x_1 + x_2)^r - r x_1 x_2 + \frac{1}{x_1 x_2} = (-f)^r + (1)^r + 1 - \frac{1}{f} \rightarrow -f + 1 + 1 - \frac{1}{f} = -\frac{2f+1}{f} \rightarrow x^2 - \frac{51}{f}x - \frac{2f+1}{f} = 0 \rightarrow f x^2 - 51x - 2f - 1 = 0$$

$$\left(\sqrt[r]{x^f} + 1 + \sqrt[r]{x^r} \right) \times \left(\sqrt[r]{x^r} - 1 \right) = r \sqrt[r]{x} \rightarrow a = x^{\frac{r}{f}} \xrightarrow{a^2} (a-1)(a^2+1) = a^3-1$$

$$\xrightarrow{\sqrt[r]{x^r} \rightarrow (x^{\frac{r}{f}})^r = x^r - 1 \rightarrow \frac{x^r-1}{x^{\frac{r}{f}}} = r x^{\frac{1}{f}} \xrightarrow{\text{ضرب در } x^{\frac{r}{f}}} x^r - 1 = r x$$

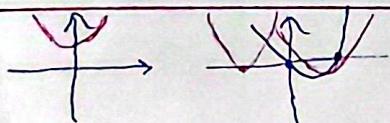
$$= x^r - 1 = r x \rightarrow x^r - r x - 1 = 0 \rightarrow x_1 + x_2 = \frac{-b}{a}$$

$$\rightarrow -(-r) = +r$$

$$x + r x = \frac{a}{r} \rightarrow x = \frac{a}{1+r} \rightarrow 3 \times \left(\frac{a}{1+r} \right)^2 - a \left(\frac{a}{1+r} \right) + f = 0$$

$$3 \frac{a^2}{1+r^2} - \frac{a^2}{1+r} + f = 0 \rightarrow \frac{-9a^2}{1+r^2} = -f \rightarrow a^2 = \frac{f}{3} \rightarrow a = \pm \sqrt{\frac{f}{3}}$$

$$1 - (-1) = 14$$



۷- آخر سعی رو به پایین تا شرفه اولی از ۳ نفی گذرد.

$$a > 0$$

$$\alpha = 0$$

$$s > 0$$

$$\rightarrow \frac{-b}{2a} > 0 \rightarrow \frac{-3+2a}{4} > 0$$

$$\frac{m+14}{a} < 0$$

$$\rightarrow \begin{array}{c|c|c} a & + & -f \\ \hline + & - & + \end{array}$$

$\rightarrow -\frac{3}{4} < a < 0 \text{ و } a > 0$ اشتراک تعیبه مقداری اعتبار نخواستند

$$y = ax^2 + bx + c \rightarrow x = \frac{-b}{2a}$$

$$\frac{-a}{2} = x \text{ جواب } \text{میان } x = \frac{2}{-2} = -1 \Rightarrow \frac{-a}{2} = -1 \rightarrow \boxed{a=2}$$

$$1) x^2 + 2x - 2 = 1 \rightarrow x^2 + 2x - 3 = 0 \rightarrow (x+3)(x-1) = 0 \rightarrow x = 1 \text{ و } x = -3$$

$$2) -x^2 - 2x + b = 1 \xrightarrow{x=1} -1 - 2 + b = 1 \rightarrow \boxed{b=4}$$

$\begin{matrix} b & x & a \\ \uparrow & \uparrow & \\ 4 & 1 & 1 \end{matrix}$

$$S = \frac{-b}{2a} = \frac{a}{2} = 1 + \left(\frac{-a}{2a}\right)^{-\frac{1}{2}} \rightarrow \boxed{a=2-1=1}$$

$$2x^2 + x - 4 = 0 \rightarrow b^2 - 4ac = 1^2 - 4(-8) = 1 + 32 = 33 \rightarrow \frac{-1 \pm \sqrt{33}}{4} = \frac{-1 \pm \sqrt{33}}{4}$$

$$\frac{-1 - \sqrt{33}}{4} = \frac{-1 - \sqrt{33}}{4}$$

→ ریشه‌های
اول و دوم

$$\frac{-1 - \sqrt{33}}{4} = \alpha \text{ و } \frac{-1 + \sqrt{33}}{4} = \beta \rightarrow \alpha\beta = \frac{c}{a} = \frac{-4}{2} = -2 = \frac{b}{2} \rightarrow \boxed{b=-4}$$

$$\left[\frac{-4}{2}\right] = \left[\frac{-2}{1}\right] = \boxed{-2}$$

$$x^2 + 4x + m = 0 \begin{cases} \alpha \\ \beta \end{cases} \quad S = -4 \rightarrow \alpha + \beta$$

$$x^2 + 2x - 3m = 0 \begin{cases} \alpha' \\ \beta' \end{cases} \quad S = -2 = \alpha + \beta'$$

$$S \alpha + \beta = -4$$

$$\alpha + \beta' = -2 \rightarrow \beta' - \beta = -2 - (-4) = 2$$

اختلاف
ریشه‌های غیر مشترک