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$$(2\beta-1)^2\beta = 4\beta^3+4\beta-2\beta^2$$

$$\frac{4\alpha}{2\beta^2}+\frac{\beta^2}{2}=\frac{4(\alpha-\beta)}{2(2\beta-1)}+\frac{(2\beta^2-1\beta)}{2}=$$

$$\frac{20-4\beta+12\beta^2+4\beta-2\beta^2}{2(2\beta-1)}=$$

$$\Delta b \rightarrow \frac{(4-12)}{2}=\frac{3}{4}$$

$$\frac{-b}{2a}=\frac{2}{4}\Rightarrow -4b=4a$$

$$-2b=2a$$

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

$$-\frac{1}{2}b m^2+bn+c=y \longrightarrow -\frac{1}{2}b\times\frac{9}{4}+b\times\frac{-3}{2}+c=-4$$

$$-\frac{1}{2}b\times\frac{1}{9}+b\times 2+c=-4$$

$$\begin{cases} -2b+c=-4 \\ -b+c=-4 \\ 2b-2c=8 \end{cases} \rightarrow -b-c=4$$

$$b+c=4,\ -b+c=-4 \Rightarrow c=0,\ b=4$$

$$a=\frac{-8}{4}$$

$$\frac{\sqrt{\Delta}}{|a|}=\frac{3}{2}k \qquad \frac{\sqrt{4k^2-20}}{1}=\frac{3}{2}k$$

$$\left[\frac{k^2}{2}\right]=\left[\frac{9}{2}\right]=4$$

$$\frac{2\sqrt{k^2-5}}{1}=\frac{9}{4}k$$

$$2\sqrt{k^2-5}=2k$$

$$9k-45=4k^2 \Rightarrow 4k^2-45=0$$

$$k^2=9 \Leftarrow k^2-9=0$$

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$S = \frac{-b}{a} \qquad P = \frac{c}{a}$

$\alpha^۲+\beta^۲ = S^۲ - ۲P$

$\frac{۳+(-۵)}{۲} = -۱ \Rightarrow \frac{-b}{a} = -۱ \qquad b=a$

$\frac{b^۲-۴ac}{-۴a} = \frac{b^۲-۴bc}{-۴b} = \frac{b(b-۴c)}{-۴b} = ۱$

$a(x+۱)^۲+۱ = y = ax^۲+۲ax+a+۱$

$\alpha^۲+\beta^۲ = S^۲-۲P = ۴-۲\left(\frac{a+۱}{a}\right) = ۵$

$\frac{۳a+۲}{a} = -۱ \Rightarrow ۳a+۲=-a \Rightarrow$

$۴a=-۲ \qquad a=-\frac{۲}{۴}$

$a+۱ = -\frac{۲}{۴}+۱ = \frac{۱}{۲}$

(۵)

$\alpha < \beta < \frac{۹}{۲}$

	α		β	
−	|	+	|	−

$-\frac{۸۱}{۴}+\frac{۴۵}{۲}+m<۰ \qquad ۲۵+۴m>۰$

$۴m>-۲۵$

$\frac{-۸۱+۹۰}{۴}+m<۰$

$m>\frac{-۲۵}{۴}=-۶٫۲۵$

$m<-\frac{۹}{۴}=-۲٫۲۵$

$-۶٫۲۵<m<-۲٫۲۵ \Rightarrow -۵,-۴,-۳,-۲ \Rightarrow ۴$

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$m > ٠$

$$\frac{١٤٤ - ٤m(٥m-١)}{-٤m} = ٩$$

$$١٤٤ - ٢٠m^٢ + ٤m = -٨m$$

$$-٢٠m^٢ + ١٢m + ١٤٤ = ٠$$

$$٥m^٢ - ٣m - ٣٦ = ٠$$

$$m = \frac{-٣ \pm \sqrt{٧٢٩}}{١٠} \quad (٢٧) \quad = \frac{-٢٤}{١٠} \; , \; \frac{٣٠}{١٠} = ٣$$

غ ق ق

$$a = \frac{-b}{٢a} = \frac{٦}{٣} = ٢$$

② ⑦

$$\alpha\beta = a^٢$$

$$٢a - ١ = a^٢$$

$$٠ = a^٢ - ٢a + ١$$

$$٠ = (a-١)^٢$$

$$١ = a$$

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$x^2 = t$

$t^2 - 7t - 5 = 0$

$t = \frac{7 \pm \sqrt{49 + 20}}{2} = \frac{7 + \sqrt{69}}{2}$ (مثبت)

$x^2 = \frac{7 + \sqrt{69}}{2} = S > 0 \Rightarrow x = \pm\sqrt{\frac{7 + \sqrt{69}}{2}}$

$-4x - 4 = kx^2 - 4x - 9$ (۹)

$0 = kx^2 - 2$

$2 = kx^2$ $\quad x = \frac{6}{12}$

$1 = \frac{2}{k}$ $\quad y_S = \frac{49 - 4 \times 2 \times (-9)}{-4 \times 2} = \frac{49 + 72}{-8}$ (۸)

$2 = k$

۳ (۱۰)

$-mx^2 + mx + 1 \neq -m - x$

$-mx^2 + (m+1)x + 1 + m \neq 0$

$(m+1)^2 + 4m(1+m) < 0$

$m^2 + 2m + 1 + 4m + 4m^2 < 0$

$5m^2 + 6m + 1 < 0$ $\quad m = (-1, -\frac{1}{5})$

$-1 \quad -\frac{1}{5}$

$+ \mid - \mid +$