Subject : آنیاز کریم زاده _ تطبیق Date یازدهم ریاضی B

۱۳/۲۵

۱_ $\alpha\beta = \frac{4}{3} \rightarrow 3\beta^2 = \frac{4}{3} \rightarrow \beta^2 = \frac{4}{9} \rightarrow \beta = \pm\frac{2}{3} \rightarrow \alpha = \pm 2$

$\alpha = 3\beta \qquad \frac{a}{3} = \alpha + \beta$

$\rightarrow a = 3\alpha + 3\beta \rightarrow (8)$ ، (-8)

$\rightarrow 8 - (-8) = 16$

(۱)

۲_ $36x^2 - (m+14)x + 1 = 0$

$\hookrightarrow \alpha\beta = \frac{1}{36}$

$\frac{\alpha+\beta+2\sqrt{\alpha\beta}}{\alpha\beta} = 25 \rightarrow \frac{\frac{m+14}{36} + 2\sqrt{\frac{1}{36}}}{\frac{1}{36}} \rightarrow m + 14 + 12 = 25 \rightarrow m = -1$

$\frac{1}{\sqrt{\alpha}} + \frac{1}{\sqrt{\beta}} = \frac{\sqrt{\alpha}+\sqrt{\beta}}{\sqrt{\alpha\beta}} = \frac{5}{6}$

$\rightarrow -2x^2 + 2x + 1 \rightarrow \frac{c}{a} = -2$

$(\sqrt{\alpha}+\sqrt{\beta})^2 \rightarrow \alpha + \beta + 2\sqrt{\alpha\beta} \rightarrow \sqrt{\alpha}+\sqrt{\beta} = \frac{5}{6} \rightarrow \alpha+\beta+2\sqrt{\alpha\beta} = \frac{5}{6}$

$\alpha + \beta = \frac{m+14}{36} = \frac{3}{6}$

$\rightarrow m + 14 = 18 \rightarrow \boxed{m = 4}$

$mx^2 + 2x + 2 = 0 \rightarrow \frac{2}{m} = \frac{2}{2} = \boxed{1}$ ✓

(۰/۵)

۳_ $4\alpha^3 + k\alpha^2 - 9\alpha - 2 = 0 \qquad \rightarrow 4(\alpha^3+\beta^3) + k(\alpha^2+\beta^2) - 9(\alpha+\beta) - 4 = 0$

$4\beta^3 + k\beta^2 - 9\beta - 2 = 0 \quad \}+ = 0 \qquad -9$

$(\alpha+\beta)^3 - 3\alpha\beta(\alpha+\beta) \rightarrow 1 + 6 = 7 \qquad \rightarrow 28 + 5k - 13 = 0 \rightarrow 15 = -5k$

$(\alpha+\beta)^2 - 2\alpha\beta = 1 + 4 = 5 \qquad \rightarrow \boxed{k = -3}$

(۱)

۴_

α		β		0
+		−		+

$\rightarrow 0 + 0 + a > 0$

$x^2 + 6x + a = 0 \qquad \alpha^2 + 2(\alpha^2+\beta^2) = 12\sqrt{2} + 85$

$\alpha + \beta = -6 \qquad \alpha^2 + 72 - 4a = 12\sqrt{2} + 85$

$\alpha = -\beta - 6$

(۰)

$S = -6 \qquad \alpha\beta = a \qquad \alpha,\beta = \frac{-6 \pm \sqrt{36 - 4a}}{2} \rightarrow \alpha < \beta \rightarrow \alpha = -3 - \sqrt{9-a}$

$3\alpha^2 + 2\beta^2 = \alpha^2 + 2(S^2 - 2P) = 12\sqrt{2} + 85 \rightarrow a = 1$

$x^2 - Vx - a = 0 \rightarrow c = -a \Rightarrow x_1 > 0 \checkmark \quad x_2 < 0$ ✗ (۵)

$\sqrt{x_1} = \pm x_1 \rightarrow \alpha + \beta = 0$ (۶)

$\alpha\beta = P \Rightarrow rp = V + \sqrt{49}$

$x_1 = \frac{V + \sqrt{r9 + r\cdot}}{r} = \frac{V + \sqrt{49}}{r}$

$t^2 - Vt - a = 0 \rightarrow t = \frac{V \pm \sqrt{49}}{r}$

$a = \frac{V+\sqrt{49}}{r} \rightarrow \begin{cases} a_1 = \sqrt{\frac{V+\sqrt{49}}{r}} \\ a_2 = -\sqrt{\frac{V+\sqrt{49}}{r}} \end{cases} \rightarrow S = 0 \;,\; P = \left(-\frac{V+\sqrt{49}}{r}\right)$

$rx^2 - ax + b = 0 \rightarrow \alpha_1 + \beta_1 = S_1 = \frac{a}{r} \rightarrow rx - 12 + b = 0$ (۷)

$rp^2 - rSp + rS = aq + V\sqrt{49}$

$rax^2 + ax - 4 = 0 \rightarrow \alpha_2 + \beta_2 = S_2 = \frac{-1}{r} \rightarrow -rx^2 + 12x - 4 = 0$

$1 + \left(\frac{1}{r}\right) = \frac{a}{r} \rightarrow a = 1$ (۵)

$\alpha_1\beta_1 = r \rightarrow \left(\alpha_1 + \frac{1}{r}\right)\left(\beta_1 + \frac{1}{r}\right) = \frac{b}{r}$

$\rightarrow \alpha_1\beta_1 + \frac{1}{r}(\alpha_1 + \beta_1) + \frac{1}{r} = \frac{b}{r} \rightarrow b = -4 \qquad \left[\frac{-4}{r}\right] = [-1\cdot] = -r$

$x^2 - (a+1)x + a = 0 \rightarrow r\alpha_1 r = a+1 \qquad \alpha^2 + r\alpha = a$ (۸)

$x^2 - (ra+1)x + b = 0 \rightarrow r\alpha + r = ra + 1$ (۹)

$\begin{cases} \alpha^2 + r\alpha = a \\ r\alpha + 1 = a \end{cases} \rightarrow \alpha^2 - 1 = 0$

$\rightarrow r\alpha + r = 10 \rightarrow \alpha = r$

$\alpha = \pm 1 \rightarrow +1 \checkmark$

$\alpha^2 + r\alpha = b \rightarrow 14 + 1 = rr - b$

$\beta = r \checkmark$

$b - a = rr - r = r1$

$ax^2 - ax - b = 0 \rightarrow \alpha + \beta = 1$ (۱۰)

$\alpha\beta = \frac{-b}{a}$

$r\alpha\beta(\beta - 1) + r\alpha\beta^2 + r\alpha^2 \rightarrow -r\alpha\beta + r\left(\frac{1}{(\alpha+\beta)^2} - r\alpha\beta\right)$ (۶)

$\frac{r\alpha b}{a} + \frac{r\alpha b}{a} + r\alpha = 1V \rightarrow \frac{4\alpha b}{a} = -r \rightarrow -\frac{b}{a} = \frac{1}{r\alpha} = \alpha\beta$

$\alpha - \beta \rightarrow \sqrt{(\alpha-\beta)^2} = \sqrt{(\alpha+\beta)^2 - r\alpha\beta} = \sqrt{1 - \frac{1}{\omega}} = \frac{r}{\sqrt{\omega}}$

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$x^2+x-1-m^2=0 \longrightarrow \alpha+\beta=-1$ 9.

$\alpha^2+\beta^2$ $\alpha\beta=-1-m^2 \longrightarrow \alpha,\beta<0$ ①

$\hookrightarrow (\alpha+\beta)^2-2\alpha\beta = 1+2+2m^2 = 2m^2+3 > 0 \longrightarrow m^2=0$

$\alpha^2+\beta^2 = S^2-2P \longrightarrow 2m^2+3 \longrightarrow 2m^2 \geq 0 \longrightarrow 2m^2+3 \geq 3$ (4

$\min = 3$

$\frac{-2+3}{2}=-1$ $ext\Big|_{1}^{-1}$ $\frac{\alpha+\beta}{2}=-1 \longrightarrow \alpha+\beta=-1=\frac{-b}{a}$ 10.

۰٫۷۵

$a(+1)+b(-1)+c=1$ $\overline{(\alpha+\beta)^2-2\alpha\beta=5}^{1} \longrightarrow \alpha\beta=\frac{c}{a}=-2$

$a-b+c=1 \rightarrow -a+a-2a=+1$

$\rightarrow a=\frac{-1}{2}$ $\frac{c}{a}=-2 \rightarrow \boxed{c=1}$ ✓

$x_S=-1$ $y=ax^2+2ax+a+1$ $\alpha^2+\beta^2=S^2-2P \longrightarrow a=\frac{-2}{3}$

$a+1=\frac{1}{3} \longleftarrow$ عرض از مبدا