نام و نام خانوادگی ..... پاسخنامه تشریحی تکلیف شماره ۲۲۰ کلاس ..... دهم B .....

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$x^2-\omega x+2=0 \rightarrow \frac{-b}{a}=-\omega=\alpha+\beta \rightarrow \alpha\beta=2 \rightarrow \alpha=\frac{2}{\beta} \rightarrow \beta+\frac{2}{\beta}=\omega$

$4\alpha+\beta^{\omega}=4(\frac{2}{\beta})+\beta^{\omega} \rightarrow \frac{8}{\beta}+\beta^{\omega} \xrightarrow{\div \omega\beta^{4}} \frac{8}{\omega\beta^{4}}+\frac{\beta^{4}}{\omega} \rightarrow \frac{1}{\omega}(\beta^{4}+\frac{8}{\beta^{4}})$

$(\beta+\frac{2}{\beta})^2-(9)(\beta+\frac{2}{\beta})=18-9\times\omega=9\omega \rightarrow \frac{1}{8}\times 9\omega=\underline{19}$

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$(2y-4)\ ,\ (-1\omega,-4)$

$x=\frac{2-1/\omega}{2}=\frac{1/8}{2}=0/1\omega$

$\frac{\alpha+\beta}{2}=0/1\omega \rightarrow \alpha+\beta=1/\omega$

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$x^2-2kx+\omega=0 \rightarrow \alpha+\beta=2k \quad ,\ \alpha\beta=\omega$

$\alpha-\beta=\frac{4}{2}k \rightarrow (\alpha-\beta)^2=(\alpha+\beta)^2-4\alpha\beta \rightarrow (\frac{4}{3}k)^2=(2k)^2-20$

$\rightarrow 14k^2=34k^2-28\omega \rightarrow k^2=9$

$[\frac{k^2}{2}]=? \rightarrow \frac{9}{2}\checkmark$

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$x_{\delta}=\frac{2-\omega}{2}=-1 \qquad y=a(x-h)^2+1 \rightarrow h=-1 \rightarrow y=a(x+1)^2+1$

$\xrightarrow{y=0} a(x+1)^2+1=0 \rightarrow \alpha+\beta=-2\ ,\ \alpha\beta=\frac{1}{a}$

$(\alpha^2+\beta^2)=\omega \rightarrow \alpha^2+\beta^2=5^2-2P \rightarrow \omega=(-2)^2-2(\frac{1}{a}) \rightarrow a=-2$

$\rightarrow y=-2(x+1)^2+1 \xrightarrow{x=0} y=-2(1)+1=-1 \rightarrow (0,-1)$

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$-x^2+\omega x+m=0$

$\Delta \geq 0$

$2\omega+4m\geq 0 \rightarrow m\geq \frac{-25}{4}$

$x_{\delta}=\frac{\omega}{2}$

$x=\frac{9}{4}: -(\frac{9}{4})^2+\omega(\frac{9}{4})+m<0 \rightarrow \frac{-2\omega}{4}\leq m<\frac{9}{4}$

$m<-\frac{9}{2}$

$\rightarrow m=-4_{\delta}-\omega\ ,-4_{\delta}-2$

۶

$y = mx^2 - 12x + 3m - 1$

$x = \frac{-b}{2a} \longrightarrow x_s = \frac{12}{2m} = \frac{6}{m}$

$x = \frac{6}{m}$: $m(\frac{6}{m})^2 - 12(\frac{6}{m}) + 3m - 1 = 0 \Rightarrow \frac{36}{m} + 3m - 1 = 0 \rightarrow 3m^2 - m - 36 = 0$

$\rightarrow m = \frac{1 \pm \sqrt{1+432}}{6} \lessgtr \begin{matrix} 4 \\ -3 \end{matrix} \rightarrow a > 0 \rightarrow m = 4 \rightarrow x = \frac{6}{m} = \frac{6}{4} = \frac{3}{2}$

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$x^2 + 2(a+1)x + 2a - 1 = 0$

$\alpha^2 = \alpha\beta \longrightarrow \alpha + \beta = -2(a+1)$, $\alpha\beta = 2a - 1 \longrightarrow \alpha^2 = \alpha\beta \Rightarrow \alpha = \frac{2a-1}{\alpha} \longrightarrow \alpha^2 = \alpha(2a-1)$

$a = \frac{1}{2}$: $2(\frac{1}{2}) - 1 = 0 \longrightarrow \alpha\beta = 0 \rightarrow x^2 + 3x = 0 \longrightarrow x(x+3) = 0$

$\beta = \frac{\alpha^2}{a} = 0 \rightarrow (\frac{1}{2}, 0, 0) \longrightarrow a = \frac{1}{2}$

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$x^4 - 7x^2 - 3 = 0 \longrightarrow y = x^2 \rightarrow \Delta = 49 + 12 = 61 \rightarrow y = \frac{7 \pm \sqrt{61}}{2} > 0$

$2p^2 - 3sp + 2s = ? \longrightarrow 2p^2$ $\longrightarrow x = \pm\sqrt{\frac{7+\sqrt{61}}{2}}$

$p = \frac{-7 + \sqrt{49}}{2}$ $\longrightarrow$ $\longrightarrow 2(\frac{7+\sqrt{49}}{2})^2 = 39 + 7\sqrt{49}$

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$x = \frac{6}{12k} = \frac{2}{k}$

$y = 2(\frac{2}{k})^2 - 6(\frac{2}{k}) - 4 = \frac{8}{k^2} - \frac{12}{k^2} - 4 \rightarrow \frac{-4}{k^2} - 4 = y$

$y = -4(\frac{2}{k}) - 4 = \frac{-8}{k} - 4 \longrightarrow \frac{-8}{k^2} - 4 = y$

$\rightarrow -\frac{4}{k^2} + \frac{8}{k^2} = -4 + 4 \longrightarrow k = 2 \longrightarrow y_{(1,1)} = -\frac{4}{2} - 4 = -2 - 4 = -8$

۱۰

$-mx^2 + mx + 1 = -m - x$

$-mx^2 + mx + x + 1 + m = 0 \rightarrow -mx^2 + (m+1)x + (m+1) = 0 \longrightarrow \Delta < 0$

$\Delta = (m+1)^2 - 4(-m)(m+1) = (m+1)(m+1+4m) = (m+1)(5m+1) < 0$

-1 ✓ , $-\frac{1}{5}$ ✓

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