

SUBJECT:

Page : ()

Year: Month: Day:

سوال ۱

۱) $x^2 - 4x + 7 = y$ ext $\left| \frac{-b}{2a} = \frac{4}{2} = 2 \right|$

۲) $y = -x^2 + 4x - 1$ ext $\left| \frac{-b}{2a} = \frac{-4}{-2} = 2 \right|$

۳) $x^2 + (m+1)x + \frac{1}{4}m + 2 = 0$ (سوال ۱)

$m^2 + 2m + 1 - 4m - 1 > 0 \rightarrow m^2 - 2m - 1 > 0 \rightarrow (m-2)(m+1) > 0$ $\frac{-1}{2} < m < 2$ $\frac{-1}{2} < m < 2$

۴) $\Delta = 0 \rightarrow m^2 - 2m - 1 = 0 \rightarrow m = -1, 3$

۵) $\Delta < 0 \rightarrow m^2 - 2m - 1 < 0 \rightarrow -1 < m < 3$

۶) $\Delta > 0 \rightarrow m^2 - 2m - 1 > 0 \rightarrow m > 3$ $m < -1$

۷) $x^2 + (m+1)x + \frac{1}{4}m + 2 = 0$ (سوال ۲)

$m^2 + 2m + 1 - 4m - 1 > 0 \rightarrow m^2 - 2m - 1 > 0 \rightarrow (m-2)(m+1) > 0$ $\frac{-1}{2} < m < 2$ $\frac{-1}{2} < m < 2$

۸) $\Delta < 0 \rightarrow m^2 - 2m - 1 < 0 \rightarrow -1 < m < 3$

۹) $\Delta > 0 \rightarrow m^2 - 2m - 1 > 0 \rightarrow m > 3$ $m < -1$

۱۰) $\Delta < 0 \rightarrow m^2 - 2m - 1 < 0 \rightarrow -1 < m < 3$

۱۱) $\frac{-b}{2a} = -2 \rightarrow \frac{2(m+1)}{2(m-1)} = -2 \rightarrow m+1 = -2m+2 \rightarrow 3m = 1 \rightarrow m = \frac{1}{3}$

$$\frac{r_1^r}{r} - (r \sin \alpha) \lambda + \frac{r}{r} = 0 \rightarrow \Delta > 0 \rightarrow r \sin^2 \alpha - r > 0 \rightarrow \frac{-1}{+1} \frac{1}{-1} + \begin{cases} \frac{r}{r} \lambda^r - r \lambda + \frac{r}{r} \rightarrow \boxed{\lambda = \frac{r}{r}} \\ \frac{r}{r} \lambda^r + r \lambda + \frac{r}{r} \end{cases} \quad (سوال ٢)$$

$$\begin{aligned} r_1^r - r_1 - 1 &= (\lambda - 1)(r_1 + 1) \\ r_1^r - r_1 - 0 &= (\lambda + 1)(r_1 - 0) \end{aligned} \rightarrow y = \frac{(\lambda - 1)(r_1 + 1)(\lambda + 1)(r_1 - 0)}{-(\lambda + 1)(\lambda - 1)} \leftarrow y = \frac{(r_1^r - r_1 - 1)(r_1^r - r_1 - 0)}{1 - \lambda^r} \quad (سوال ٣)$$

$$\rightarrow y = -(r_1 + 1)(r_1 - 0) = -(r_1^r - 1r_1 - 0) = -r_1^r + 1r_1 + 0 = 0 \quad \text{max} \left| \frac{-b}{2a} = \frac{-1r}{-1r} \right|$$

$$\frac{-\Delta}{2a} = \boxed{\frac{r_1^r}{r_1}} \quad \checkmark$$

$$m \lambda^r - (m+r) \lambda - r = 0 \rightarrow r \lambda^r - 4 \lambda - r = 0 \quad (سوال ٤)$$

$$r(\alpha + \beta) - r = 0 \alpha \beta \rightarrow r \left(\frac{m+r}{m} \right) - r = \frac{-10}{m} \rightarrow \frac{r m + r + 10}{m} = +r \rightarrow r m + r = +r m \rightarrow r m = +14$$

$$m = r$$

$$\alpha^r + \beta^r = (\alpha + \beta)^r - r \alpha \beta = \left(\frac{r}{r} \right)^r - r \left(-\frac{1}{r} \right) = \frac{9}{r} + 1 = \boxed{\frac{19}{r}}$$

$$\lambda^r - \omega \lambda + r = 0$$

$$\frac{r \alpha + \beta^r}{\alpha \beta^r} \times \left(\frac{\alpha^r}{\alpha^r} \right) = \frac{r \alpha^r + \beta^r (\beta^r \alpha^r)}{\alpha \beta^r \alpha^r} = \frac{r \alpha^r + r \beta^r}{r \times \alpha} = \frac{\alpha^r + \beta^r}{\alpha} = \frac{\frac{120}{\alpha} - \frac{r}{\alpha} \beta (v + \beta)}{\alpha} = \frac{90}{\alpha} = \boxed{90}$$

$$\alpha \beta = r$$

$$\alpha + \beta = \omega$$

$$y_1 = a \lambda^r + b \lambda + c \rightarrow a \lambda^r + b \lambda + r = r \lambda + 10 \rightarrow a \lambda^r + (b-r) \lambda - 4 = 0 \quad \begin{cases} r a + r b - r - 4 = 0 \\ 9 a + r b - 4 - 4 = 0 \end{cases} \quad (سوال ٥)$$

$$y_1 = r \lambda + 10$$

$$\rightarrow -\lambda^r + v \lambda + r = 0$$

$$-\frac{b}{2a} = \frac{-v}{-1} = \boxed{\frac{v}{r}}$$

$$\begin{aligned} \rightarrow r a + b &= \omega \\ \rightarrow r a + b &= r \end{aligned} \rightarrow \begin{aligned} a &= -1 \\ b &= v \end{aligned}$$

$$y = r \lambda^r + (m+1) \lambda + m + 4 \xrightarrow{\lambda^r} \lambda = r \lambda^r + m \lambda + \lambda + m + 4 \rightarrow r \lambda^r + m \lambda + m + 4 = 0 \quad (سوال ٦)$$

$$m^r \cdot \lambda m - r \lambda = 0 \quad \frac{-r}{+1} \frac{1}{-1} +$$

$$(m-1r)(m+r) = 0 \rightarrow$$

$$\begin{cases} m \leq -r \\ m \geq 1r \end{cases}$$