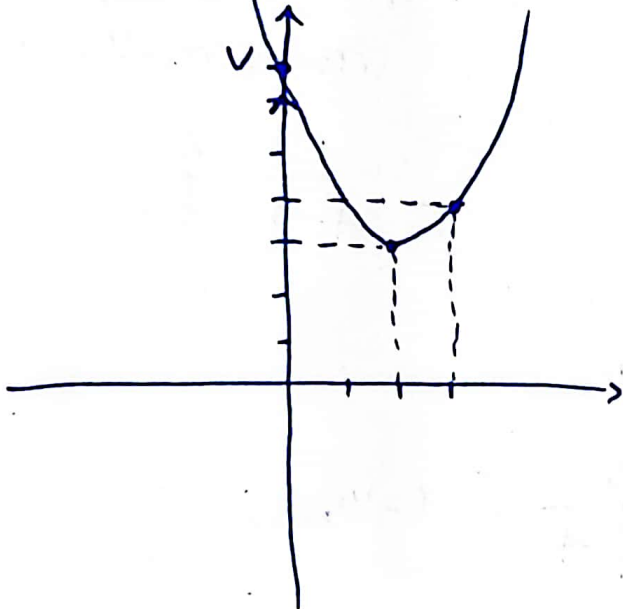


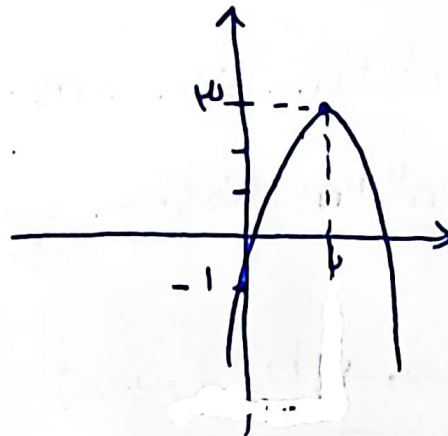
الف) $y = x^2 - \varepsilon x + 7$

ext $\begin{cases} -\frac{b}{2a} = \frac{\varepsilon}{2} = 2 \\ y = \varepsilon - 8 + 7 = 3 \end{cases}$

1



ب) $y = -x^2 + \varepsilon x - 1 \rightarrow$ ext $\begin{cases} -\frac{b}{2a} = \frac{\varepsilon}{-2} = -2 \\ y = -\varepsilon + 8 - 1 = 7 \end{cases}$



$(m-2)x^2 - 2(m+1)x + 1 = y$

3

الف) $P > 0 \rightarrow S < 0 \rightarrow \Delta > 0 \rightarrow P > 0 \rightarrow \frac{1}{m-2} > 0 \rightarrow m-2 > 0 \rightarrow m > 2$

$S < 0 \rightarrow \frac{2(m+1)}{m-2} < 0 \rightarrow \frac{-1}{+} \frac{2}{-} \frac{+}{+}$
 $\emptyset$

$\Delta > 0 \rightarrow \varepsilon m^2 + \varepsilon + \varepsilon(2)m - 4m + 1 > 0$
 $\varepsilon m^2 - m + 8 > 0 \rightarrow \Delta < 0$

ب) $S < 0 \rightarrow P < 0 \rightarrow m-2 < 0 \rightarrow m < 2$
 $(-1, 2)$ $(-\infty, 2)$

$\rightarrow (-1, 2) \cap (-\infty, 2) = (-1, 2)$

$$P x^P + (m+1)x + \frac{1}{P} m + P = 0.$$

.2

الف) $\Delta > 0 \rightarrow b^2 - 4ac > 0 \rightarrow m^2 + 1 + 4m - 4m - 1 > 0 \rightarrow m^2 - 4m - 1 > 0$
 $(m-2)(m+2) > 0$

$$P x(\frac{1}{P} m + P) = m + 4$$

$$(-\infty, -2) \cup (2, +\infty)$$

$$\begin{array}{c} -2 \quad 2 \\ + \quad - \quad + \end{array}$$

ب) $\Delta = 0 \rightarrow m^2 - 4m - 1 = 0 \rightarrow m = 2, -2$

ج) $\Delta < 0 \rightarrow m^2 - 4m - 1 < 0 \rightarrow \begin{array}{c} -2 \quad 2 \\ + \quad - \quad + \end{array} \rightarrow (-2, 2)$

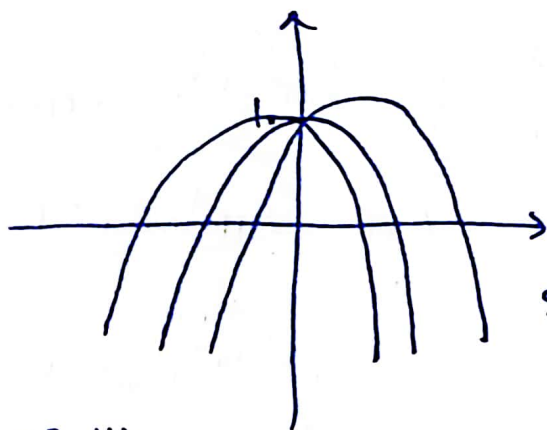
د) $\Delta > 0 \rightarrow (-\infty, -2] \cup [2, +\infty)$

$$(m-2)x^P - P(m+1)x + 1 = 0$$

$$m-2 < 0 \rightarrow m < 2$$

.4

الف)



$$(-\infty, 2)$$

$$P < 0 \rightarrow \frac{1}{m-2} < 0 \rightarrow m < 2$$

$$\Delta > 0 \rightarrow 4m^2 + 4 + 4m - 4m - 4 > 0 \rightarrow 4m^2 - 4 > 0$$

$$4m^2 - 4 > 0 \rightarrow m^2 - 1 > 0 \rightarrow (m-1)(m+1) > 0$$

$$S = \{m < -1\} \cup \{m > 1\}$$

ج)

ب) $\frac{-b}{2a} = -2 \rightarrow \frac{P(m+1)}{Pm-4} = \frac{m+1}{m-2} = -2 \rightarrow m+1 = -2m+4 \rightarrow 3m = 3 \rightarrow m = 1$

$$\frac{p^2}{p} - (p \sin \alpha) x + \frac{p}{p} = 0 \rightarrow \Delta \rightarrow \varepsilon \sin^2 \alpha - \varepsilon \rightarrow -5$$

$$\sin^2 \alpha - 1 \rightarrow (\sin \alpha - 1)(\sin \alpha + 1) \rightarrow \frac{-1}{+} \frac{1}{-} \rightarrow$$

$$\sin \alpha = 1 \rightarrow \frac{p}{p} x^2 - p x + \frac{p}{p} = 0 \rightarrow \frac{p}{p} x^2 - \varepsilon x + \frac{p}{p} = 0 \rightarrow (p x - p)^2 = 0 \rightarrow$$

$$\sin \alpha = -1 \rightarrow \frac{p}{p} x^2 + p x + \frac{p}{p} = 0 \rightarrow (p x + p)^2 = 0 \rightarrow x = -\frac{p}{p} \omega \varepsilon \quad x = \frac{p}{p} \checkmark$$

$$\frac{p}{p} x^2 - p x + \frac{p}{p} = 0 \rightarrow \boxed{x = \frac{p}{p}}$$

$$\frac{(p x^2 - p x - 1)(p x^2 - p x - \omega)}{1 - x^2} \rightarrow \frac{(p x + 1)(x - 1)(x + 1)(p x - \omega)}{-(x - 1)(x + 1)} = y \quad -6$$

$$-(p x + 1)(p x - \omega) = y \rightarrow -p x^2 + p x + \omega = y \rightarrow \frac{-\Delta}{ka} = \frac{-(199 + 1p.)}{-p \varepsilon}$$

$$\boxed{1p \cdot \varepsilon}$$

$$p(\alpha + \beta) = \omega(\alpha \beta) + v \rightarrow p\left(\frac{m+p}{m}\right) = \omega\left(\frac{-p}{m}\right) + v \rightarrow \frac{pm+p}{m} = \frac{-\omega p}{m} + v \rightarrow -7$$

$$\frac{pm+p}{m} = v \rightarrow pm+p = vm \rightarrow \varepsilon m = 19 \rightarrow m = \varepsilon \rightarrow \varepsilon x^2 - 9x - p = 0$$

$$\alpha^p + \beta^p = (\alpha + \beta)^p - p \alpha \beta = \frac{9}{\varepsilon} + \frac{\varepsilon}{\varepsilon} = \boxed{\frac{10}{\varepsilon}}$$

$$\frac{\varepsilon \alpha}{\omega p^2} + \frac{\beta^p}{\omega} = \frac{\alpha^p}{\omega} + \frac{\beta^p}{\omega} = \frac{S^p - pSP}{\omega} = \frac{1p\omega - p}{\omega} = 19 \quad .8$$

$$S = \omega$$

$$p = p \rightarrow \alpha \cdot \beta = p \rightarrow \alpha = \frac{p}{\beta} \rightarrow \alpha^p = \frac{\varepsilon}{\beta^p} \rightarrow \beta^p = \frac{\varepsilon}{\alpha^p}$$

$$\begin{cases} \varepsilon a + \nu b + c = 1\varepsilon \\ 9a - \mu b + c = \varepsilon \end{cases} \rightarrow -\omega a + \omega b = 1 \rightarrow b - a = \nu \rightarrow b = \nu + a$$

$$c = \varepsilon$$

$$\varepsilon + \varepsilon a + \nu b = 1\varepsilon \rightarrow \varepsilon a + \nu b = 1$$

$$\nu + \mu a = \omega \leftarrow \nu a + b = \omega$$

$$\mu a = \mu$$

$$\boxed{a = 1}$$

$$b = \mu$$

$$c = \varepsilon$$

$$y = \nu x^{\nu} + (m+1)x + m + \varepsilon \quad .10$$

$$x = \nu x^{\nu} + m x + x + m + \varepsilon \rightarrow \nu x^{\nu} + m x + m + \varepsilon = 0 \rightarrow \Delta = 0 \rightarrow m^{\nu} - \Lambda m - \varepsilon \Lambda = 0$$

$$m = 1\nu \rightarrow \nu x^{\nu} + 1\mu x + 1\Lambda = y \rightarrow \nu x^{\nu} + 1\nu x + 1\Lambda = 0 \rightarrow$$

$$(m - 1\nu)(m + \varepsilon) = 0$$

$$x^{\nu} + 1\nu x + \mu \varepsilon = 0 \rightarrow \left(\frac{x}{\varepsilon} + \varepsilon \right) (x + \varepsilon) = 0$$

$$m = \boxed{1\nu}, \boxed{-\varepsilon}$$

$$x = -\varepsilon \quad \overline{00\varepsilon}$$