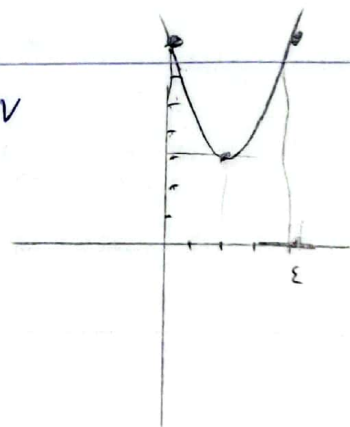
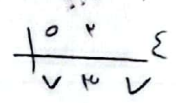


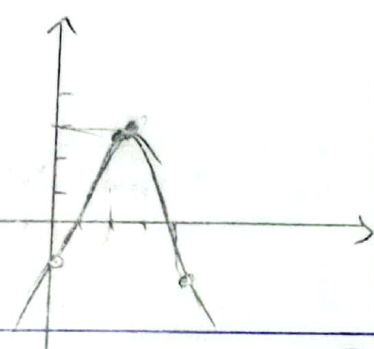
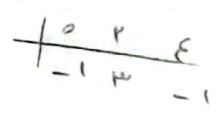
الف) $y = u^r - \epsilon n + v$

Ent / $\frac{r}{r-1} + v = w$



ب) $y = -u^r + \epsilon n - 1$

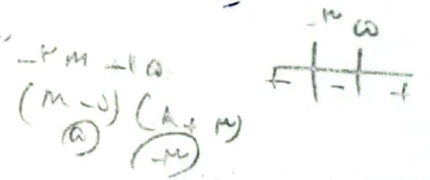
Ent / $\frac{-\epsilon}{-1} = r$
 $-\epsilon + 1 - 1 = w$



$r u^r + (m+1)n + \frac{1}{r} m + r = 0$

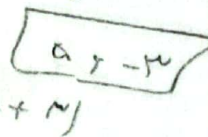
$m < -r \leq m \leq \omega$

$D > 0 \rightarrow (m+1)^r - 1 \left(\frac{1}{r} m + r \right) \rightarrow m^r + 1 + r m - \epsilon m \rightarrow m^r - r m - 1 = 0$



$D = 0 \rightarrow (m+1)^r - 1 \left(\frac{1}{r} m + r \right) = 0 \rightarrow m^r + 1 + r m - \epsilon m - 1 = 0 \rightarrow m^r - r m - 1 = 0$

ب) رتبة صف:



$D < 0 \rightarrow (m+1)^r - 1 \left(\frac{1}{r} m + r \right) < 0 \rightarrow m^r - r m - 1 < 0 \rightarrow -r < m < \omega$

ج) رتبة صف:

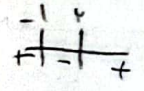
$m \leq -r \leq m \leq \omega$

د) رتبة صف:

$y = (m-r) u^r - r(m+1) u + 1$

$D > 0 \rightarrow (r m + r)^r - \epsilon (m-r) u + 1 > 0 \rightarrow (m^r - r m + 1) > 0$

$S < 0 \rightarrow \frac{r m + r}{m-r} < 0$

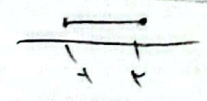


(-1, r)

$D > 0 \rightarrow \frac{1}{m-r} < \frac{r}{r} \rightarrow (r, +\infty)$

ج) رتبة صف:

$S < 0 \rightarrow \frac{r m + r}{m-r} < 0 \rightarrow (-1, r)$



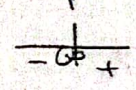
$D < 0 \rightarrow \frac{1}{m-r} < 0 \rightarrow (-\infty, r)$

$m = (-1, r)$

$y = (m-r) u^r - r(m+1) u + 1$

$m < r$

$D < 0 \rightarrow \frac{1}{m-r} < 0$



$\frac{r m + r}{r m - r} = -r \rightarrow \frac{m+1}{m-r} = -r \rightarrow m+1 = -r m + r \rightarrow m = \frac{r}{r}$

د) رتبة صف:

$$\frac{r u^r}{r} - (r \sin \alpha) u + \frac{w}{r} = 0$$

$$\Rightarrow \rightarrow r \sin \alpha - \frac{w}{r} > 0 \rightarrow r \sin \alpha - \frac{w}{r} > 0 \rightarrow \sin \alpha = 1 \rightarrow \sin = \pm 1$$

$$\text{If } u = +1 \rightarrow \frac{r u^r}{r} - r u + \frac{w}{r} = 0 \rightarrow \frac{r u^r}{r} - r u + \frac{w}{r} \rightarrow (u - 1)^r = \frac{4}{\epsilon} \checkmark$$

$$\text{If } u = -1 \rightarrow \left(\frac{r u^r}{r} + r u + \frac{w}{r} \right) \rightarrow r u^r + r u + \frac{w}{r} \rightarrow (u + 1)^r = \frac{-w}{r} \times$$

$$y = \frac{(r u^r - r u - 1)(r u^r - r u - 0)}{1 - u^r}$$

$$(r u^r - r u - 1) \div (u - 1) = r u + 1$$

$$(r u^r - r u - 0) \div (u + 1) = r u - 0$$

$$\frac{(n-1)(r u^{n+1})(u+1)(r u - 0)}{(1-u)(1+u)} \rightarrow (-r u - 1)(r u - 0) = -r u^2 + r u + 0$$

Ans: $\frac{1w}{r \epsilon}$

$$m u^r + (m+r)u - r = 0$$

$$r(\alpha + \beta) - \delta \alpha \beta = V$$

$$\boxed{r u^r - 9 u - r}$$

$$r \left(\frac{m+r}{m} \right) + \frac{1}{m} = V \rightarrow \boxed{m = 5} \quad S = \frac{r}{r} \quad P = -\frac{1}{r}$$

$$\alpha^r + \beta^r \Rightarrow S^r - r P \Rightarrow \frac{9}{\epsilon} + 1 \rightarrow \frac{1w}{\epsilon}$$

$$\frac{r \alpha + \beta^{\omega}}{\omega \beta^r}$$

$$u^r - \delta u + r = 0 \rightarrow$$

$$k r = \omega \beta - r \rightarrow k^r = \omega(\omega k - r) \rightarrow k^{\omega} = \frac{r \omega \beta - r}{\omega \beta - r} \quad \alpha + \beta = \omega \rightarrow \alpha = \omega - \beta$$

$$r \alpha + k^{\omega} \Rightarrow \frac{r(\omega - \beta) + (r \omega \beta - r)}{\omega \beta - r} = \frac{r \omega \beta - r}{\omega \beta - r} \Rightarrow \frac{1 \omega (\omega \beta - r)}{\omega \beta - r} = 1 \omega$$

$$y_1 = a u^r + b u + c$$

$$y_2 = r u + 10$$

$$\Rightarrow \begin{matrix} r & -r \\ 1\epsilon & \epsilon \end{matrix}$$

$$r = 9a - r^2 + \epsilon$$

$$1\epsilon = r a + r^2 + \epsilon$$

$$\Rightarrow \begin{cases} r a - \epsilon = 0 \\ r a + \epsilon = \omega \end{cases} \rightarrow \boxed{a = 1} \quad \boxed{b = r} \quad \textcircled{4}$$

$$y = r u^r + r u + \epsilon$$

$$\text{Ans: } \frac{-1w}{\epsilon}$$

$$y = r u^r + (m+1)u + m + \epsilon \xrightarrow{\text{differentiation}} y' = r u^r + u + m + \epsilon$$

$$\Delta \neq 0 \rightarrow (u)^r - 1(m + \epsilon) = 0 \rightarrow m^r - 1m - \epsilon \rightarrow \frac{(m-1)(m+\epsilon)}{1r} \quad \textcircled{-3}$$