

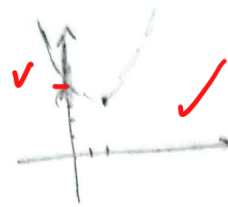
۱۸، ۱۷۵

کارن جادویی را به آرامی به یاد

۱- (۱، ۱۷۵)

محل برخورد ها
خیله مهم!

الف) $\min \left| \frac{f}{r} - 2 \right|$



$\max \left| \frac{f}{r} - 2 \right|$



(۲)

الف) $\Delta \geq 0 \quad | \quad m^2 - 2m - 1 \geq 0 \quad \Delta = 4 \quad | \quad m^2 + 2m - 4 \left(\frac{1}{r} + 2 \right) (2) \leftarrow \Delta \geq 0$

(۲)

$m^2 - 2m - 1 \geq 0$
 $\Delta \geq 0$

$\begin{cases} m \geq 2 \\ m \leq 0 \end{cases}$

$m \rightarrow -2 \quad \checkmark$

$m^2 + 2m - 4 = 12$

$\begin{cases} m^2 - 2m - 1 \geq 0 \\ m \geq -2 \\ m \leq 0 \end{cases}$

$\frac{r}{+ \phi - \phi +}$

$m \rightarrow (-\infty, 2] \cup [0, +\infty)$
 $m^2 - 2m - 1 < 0 \quad \Delta < 0 \quad (3)$

$\frac{-2}{+ | - | +}$

$m \rightarrow (-2, 0)$

$m \rightarrow (-\infty, 2] \cup (0, +\infty) \quad \checkmark$

الف) شرایط $\Delta \geq 0$ و $S < 0$

(۲)

$P > 0 \quad \frac{1}{m-2} > 0 \rightarrow m > 2$
 $S < 0 \quad \frac{2m+2}{m-2} < 0 \rightarrow \frac{1}{+ \phi - 1 +}$

$(I) \cap (II) = \emptyset \quad \checkmark$

ب) شرایط $\Delta \geq 0$

$P < 0$
 $S < 0$

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

$P < 0 \rightarrow m < 2$
 $S < 0 \rightarrow -1 < m < 2$

$(II) \cap (III) \rightarrow (-1, 2) \quad \checkmark$

الف) شرایط $\Delta \geq 0$ و $S < 0$

(۲)

$\Delta \geq 0 \quad m - 2 < 0 \rightarrow m < 2$

$\Delta \geq 0 \quad (2m+2)^2 - 4(m-2)(1) \geq 0 \rightarrow m^2 - 4m + 2 \geq 0$

$I \cap II \rightarrow m < 2 \quad \checkmark$

$\frac{-b}{2a} = -2 \rightarrow \frac{2m+2}{2m-2} = -2 \rightarrow 2m+2 = -2m+4 \rightarrow m=1 \quad \checkmark$

Δ>1 شرط (2)

$$\Delta > 1 \rightarrow \sin^2 = \left(\frac{r}{r}\right)\left(\frac{r}{r}\right) \rightarrow \sin^2 < 1 \rightarrow \sin < 1 \rightarrow \sin = 1$$

$$\rightarrow \sin x = 1 \text{ وقتی } \frac{r}{r} u^2 - ru + \frac{r}{r} = 0 \rightarrow \boxed{u = \frac{r}{r}} \checkmark$$

$$\begin{aligned} r_n^2 - ru - 1 &\xrightarrow{u=1} (u-1)(ru+1) \\ 1 - u^2 &= (1-u)(1+u) \\ r_n^2 - ru - 1 &\xrightarrow{u=1} (u+1)(ru-1) \end{aligned}$$

ضرب کردن زوج و فرد

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

وقت!

$$\frac{-\Delta}{r_n} = + \frac{r \pm 9}{r^2} \checkmark$$

$$\begin{cases} \Psi(s) = \Delta P + V \\ S_s \frac{m+r}{m} P_s = \frac{r}{m} \end{cases} \rightarrow \frac{r_{m+r}}{m} = \frac{1}{m} + V \xrightarrow{\times m} r_m = -19 \rightarrow m = r$$

$$\begin{cases} \alpha^r + \beta^r = S^r - rP \\ S = \frac{r}{r} P = \frac{1}{r} \end{cases} \rightarrow \frac{9}{r} + 1 = \boxed{\frac{19}{r}} \checkmark$$

$$P_s \propto B = r \rightarrow \alpha = \frac{r}{B} \rightarrow B_s = \frac{r}{\alpha} \checkmark$$

$$\frac{S_{\alpha} + B}{0 B^r} \rightarrow \frac{r_{\alpha}}{0 B^r} + \frac{B^r}{\omega} \rightarrow \cancel{\frac{r_{\alpha}}{0 B^r}} + \frac{B^r}{\omega} \rightarrow \cancel{\frac{B^r}{\omega}} \rightarrow \frac{r_{\alpha}}{\omega(\frac{r}{\alpha})^r} + \frac{B^r}{\omega} = \frac{\alpha^r + \beta^r}{\omega} = \frac{S^r - rSP}{\omega} = 19$$

$$\begin{vmatrix} r & r \\ 0 & r \end{vmatrix} \xrightarrow{r_{m+1}} \begin{vmatrix} r & r \\ 1 & r \end{vmatrix} \xrightarrow{r} \begin{vmatrix} r & r \\ 1 & r \end{vmatrix} \rightarrow 9a - rb + c = r \rightarrow 9a - 9b = -10 \rightarrow a + r = b$$

$$\begin{vmatrix} 0 & r \\ 1 & r \end{vmatrix} \rightarrow 9a + ru + 1 = r \rightarrow a = 1 \rightarrow b = r \rightarrow c = r \rightarrow a^r + ru + r \rightarrow u_3 = \frac{-b}{r_n} = \left(-\frac{r}{r}\right) \checkmark$$

$$\begin{cases} y_s: r_n^2 + (m+1)u + m + b \\ y_{s+1}: r_{n+1}^2 + (m+1)u + m + r = a \end{cases} \rightarrow r_n^2 + mu + m + r = 0$$

نقشه نهایی

$$\Delta = 0 \rightarrow m^2 - r(r)(m+1) = 0 \rightarrow m^2 - 18m - 19 \rightarrow \boxed{-9} \checkmark$$