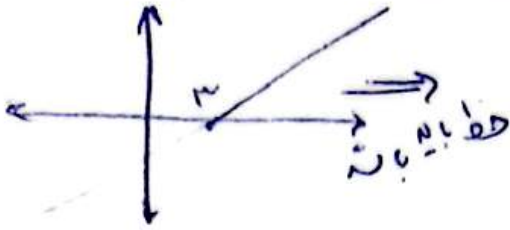


(النفا مني)

①



$$a - r = 0 \rightarrow a = r$$

$$r + b > 0$$

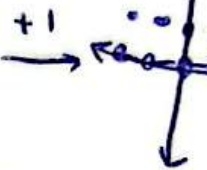
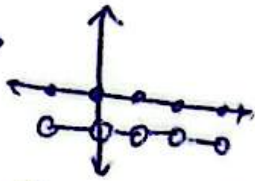
$$r > -b$$

$$-\frac{b}{r} = r \Rightarrow b = -r^2$$

② $\Delta \leq 0 \rightarrow b^2 - 4ac \leq 0 \rightarrow b^2 - 4(r - m^2) \leq 0$

$$b^2 - 4(r - m^2) \leq 0 \rightarrow m^2 \leq 1 \rightarrow -1 \leq m \leq 1 \rightarrow 1 - (-1) = 2$$

③ $[x] + [-x] \rightarrow$



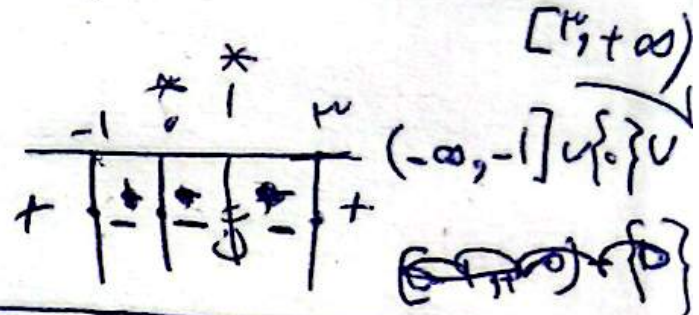
$$I \cup II \rightarrow [-1, 1]$$

$$r - x^2 > 0 \rightarrow x^2 < r \rightarrow -\sqrt{r} < x < \sqrt{r} \Rightarrow I \cap II \rightarrow (-\sqrt{r}, \sqrt{r})$$

④ $x^2 + 3x^2 > 0 \rightarrow x^2(1 + 3) > 0 \rightarrow x^2 > 0$

$$x^2 > 0 \rightarrow x \neq 0 \rightarrow (-\infty, 0) \cup (0, \infty)$$

$$\rightarrow (x^2 - 1)(x^2 + 1) > 0 \rightarrow \frac{(x^2 - 1)(x^2 + 1)}{(x^2 - 1)(x^2 + 1)} > 0$$



⑤ $|x - r| > r \rightarrow x - r > r \rightarrow x > 2r$
 $|x - r| > r \rightarrow r - x > r \rightarrow x < 0$

$\rightarrow |r - x| > r \rightarrow r - x > r \rightarrow x < 0$
 $|r - x| > r \rightarrow x - r > r \rightarrow x > 2r$

$$-r < x < r$$

$$\text{---} \quad \mu - |\lambda - \Delta| > 1 \quad \xrightarrow{-\mu} \quad |\lambda - \Delta| < \mu \quad \rightarrow \quad \mu < \lambda < 1$$

$$\sqrt{\mu - |\lambda - \Delta|} \neq 1 \quad \xrightarrow{I \cup \bar{I}} \quad \mu - |\lambda - \Delta| \neq 1 \quad \rightarrow \quad \begin{array}{l} |\lambda - \Delta| \neq \mu \\ \lambda - \Delta \neq \mu \\ \lambda - \Delta \neq -\mu \end{array} \rightarrow \mu \neq \mu, \nu$$

$$\rightarrow [\mu, \lambda] = \{\mu, \nu\}$$

$$(v) \cos x \neq 0 \rightarrow \mathbb{R} - \left\{ k\pi + \frac{\pi}{2} \right\}$$



$$\rightarrow r \cos x - 1 \neq 0 \quad \cos x \neq \frac{1}{r} \quad \mathbb{R} - \left\{ k\pi \pm \frac{\pi}{r} \right\}$$

$$(A) \quad |r_{n+1}| = |n+r| \frac{r}{r^2} \quad (r_{n+1})^r = (n+r)^r \rightarrow \varepsilon_n^r + \varepsilon_{n+1} = n + \varepsilon_n + 9$$

$$\rightarrow r^2 - r - 1 = 0 \rightarrow \frac{r \pm \sqrt{r^2 + 4}}{2} < \frac{r}{r^2} \quad \mathbb{R} - \left\{ r, -\frac{r}{r^2} \right\}$$

$$\rightarrow \mathbb{R} \setminus \left\{ \frac{-\frac{r}{r^2}}{1} \right\} = (-\infty, -\frac{r}{r^2}] \cup [r, +\infty)$$

$$(9) \quad \log_{\frac{1}{r}} \log_{\Delta} (r_{n-1}) < 0 \quad \log_{\Delta} (r_{n-1}) \leq 1 \rightarrow r_{n-1} \leq \Delta \rightarrow n \leq \mu$$

$$\log_{\Delta} (r_{n-1}) > 0 \rightarrow r_{n-1} > 1 \rightarrow n > 1$$

$$\rightarrow 1 < n \leq \mu \quad r_{n-1} > 0 \rightarrow n > \frac{1}{r}$$

(10) ان $r \cos n+1 \geq 0$ $\cos n > -\frac{1}{r}$
 $\underline{n-1}$



$\left(r k \pi - \frac{p_r}{r}, r k \pi + \frac{p_r}{r} \right)$

$$\Rightarrow \log \frac{n-1}{n+1} > 0 \rightarrow \frac{n-1}{n+1} > 1 \rightarrow \frac{n-1-(n+1)}{n+1} > 0$$

$$\rightarrow -\frac{2}{n+1} > 0 \rightarrow n < -1$$

$$\frac{n-1}{n+1} > 0$$

$$\frac{-1}{+} \cdot \frac{1}{+} = +$$

$$\rightarrow (-\infty, -1)$$