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نیایه های هم-کلیف به این

① الف)  $\cos m \neq 0$

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$\cos \neq -\frac{1}{2}$

$D_f = \mathbb{R} - \left\{ 2K\pi + \frac{4\pi}{3}, 2K\pi + \frac{2\pi}{3} \right\}$

ب)  $\cos m \neq 1$

$D_f = \mathbb{R} - \{ 2K\pi \}$

② الف)  $\tan m \neq 0$

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$\tan m \neq -1$

$\cos \neq 0$

$D_f = \mathbb{R} - \left\{ K\pi + \frac{3\pi}{4}, K\pi + \frac{\pi}{4} \right\}$

ب)  $\cot m - 1 \neq 0$

$\cot m \neq 1$

$\sin \neq 0$

$D_f = \mathbb{R} - \left\{ K\pi + \frac{\pi}{4}, K\pi \right\}$

③ الف)  $-1 \leq m^2 - 2 \leq 1$

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$1 \leq m^2 \leq 3$

$\begin{cases} 1 \leq m \leq \sqrt{3} \\ -1 \geq m \geq -\sqrt{3} \end{cases}$

$D_f = [-\sqrt{3}, -1] \cup [1, \sqrt{3}]$

ب)  $\sqrt{m} \geq 0 \Rightarrow m \geq 0$

$-1 \leq \sqrt{m} - 2 \leq 1$

$2 \leq \sqrt{m} \leq 4$

$4 \leq m \leq 16$

$D_f = [4, 16]$

④ الف)  $-1 \leq |m| - 2 \leq 1$

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$2 \leq |m| \leq 4$

$\begin{cases} 2 \leq m \leq 4 \\ -2 \geq m \geq -4 \end{cases}$

$D_f = [-4, -2] \cup [2, 4]$

ب)  $-1 \leq m^2 + 3m + 2 \leq 1$

$\frac{-2-1}{2} \leq m^2 + 3m + 2 \leq \frac{-2+1}{2} \Rightarrow (m+1)(m+2)$

$\frac{-3-0}{2} \leq m(m+3) \leq 0$

$D_f = [-3, -2] \cup [-1, 0]$

⑤ الف)  $m^2 - 4 > 0$

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$m^2 > 4$

$\begin{cases} m > 2 \\ m < -2 \end{cases}$

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

ب)  $2 - |m| > 0$

$|m| < 2$

$-2 < m < 2$

$D_f = (-2, 2)$



④ الف)  $m-3 > 0$   $\omega - m > 0$   
 $m > 3$   $m < \omega$   
 $m-3 \neq 1$   $R_f = (3, \omega) - \{ \epsilon \}$   
 $m \neq \epsilon$

→)  $m+3 > 0$   $m^2-1 > 0$   
 $m > -3$   $m^2 > 1$   
 $m+3 \neq 1$   $\begin{cases} m > 1 \\ m < -1 \end{cases}$   
 $m \neq -2$   
 $R_f = (-3, -1) \cup (1, +\infty) - \{-2\}$

⑤ الف)  $\frac{(m-3)(m-1)}{m-3} > 0$   
 $R_f = (1, +\infty) - \{3\}$

→)  $m+\omega > 0$   $\frac{m+3}{m-3} > 0$   
 $m > -\omega$   
 $m+\omega \neq 1$   
 $m \neq -2$   
 $R_f = (-\omega, -3) \cup (2, +\infty) - \{-2\}$

① الف)  $\log_2^{(m-2)} \leq 2$   
 $m-2 \leq 1$   
 $m \leq 3$   
 $m-2 > 0$   
 $m > 2$   
 $R_f = (2, 3]$

→)  $2 \log_2^m - 1 > 0$   
 $2 \log_2^m > 1$   
 $(\log_2^m) > \frac{1}{2}$   
 $m > \sqrt{2}$   
 $R_f = (\sqrt{2}, +\infty)$

② الف)  $\epsilon^m \neq 1$   
 $R_f = \mathbb{R}$

→)  $\epsilon^m \neq 1$   
 $R_f = \mathbb{R} - \{0\}$

ج)  $\epsilon^m \neq 2$   
 $R_f = \mathbb{R} - \{\frac{1}{2}\}$

→)  $\epsilon^m \neq 2$   
 $R_f = \mathbb{R} - \{\log_2^2 \epsilon\}$

③ الف)  $\epsilon m a \in \omega$   
 $m \in \frac{1+\omega}{\epsilon}$   
 $R_f = \{n / n = \frac{K-1}{\epsilon}, K \in \omega\}$

→)  $\frac{3m-2}{2m-\omega} \in \omega$   
 $R_f = \{n / n = \frac{-\omega K + 2}{3-2K}, K \in \omega\}$