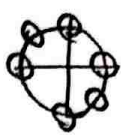


← 6) 13

الف) $\frac{\cot n + 1}{\tan n + 1} \Rightarrow \begin{matrix} \cos n \neq 0 \\ \tan n \neq -1 \\ \sin n \neq 0 \end{matrix} \Rightarrow \mathbb{R} - \left\{ \frac{k\pi}{r} \cup k\pi - \frac{\pi}{r} \right\} = D_f$ 

ب) $1 - \varepsilon \sin^2 \alpha \geq 0 \rightarrow \sin^2 \alpha \leq \frac{1}{\varepsilon} \rightarrow -\frac{1}{r} \leq \sin \alpha \leq \frac{1}{r} \Rightarrow$ 
 $D_f = \mathbb{R} - \left\{ \left(r k \pi - \frac{\pi}{r}, r k \pi + \frac{\pi}{r} \right) \cup \left(r k \pi + \frac{\pi}{r}, r k \pi + \frac{3\pi}{r} \right) \right\}$

الف) $r \sin n - 1 \geq 0 \rightarrow \sin n \geq \frac{1}{r} \rightarrow$  $\Rightarrow D_f = \left(r k \pi + \frac{\pi}{r}, r k \pi + \frac{3\pi}{r} \right)$
 ب) $1 - r \cos n \geq 0 \rightarrow \frac{1}{r} \geq \cos n = \cos n \leq \frac{1}{r} \rightarrow$  $\Rightarrow D_f = \left(r k \pi + \frac{\pi}{r}, r k \pi - \frac{\pi}{r} \right)$

الف) $-1 \leq n^2 + r n + 1 \leq 1$

$\cdot \leq n^2 + r n + 1 \rightarrow n(n+r) \leq \frac{-r}{+0-0+} \rightarrow (-\infty, -r] \cup [-1, \infty)$
 $n^2 + r n \leq 0 \rightarrow n(n+r) \leq \frac{-r}{+0-0+} \rightarrow [-r, 0]$

$D_f = [-r, -r] \cup [-1, 0]$

ب) $0 \leq -r n \leq 1 \rightarrow -0 \leq -r n \leq -r \rightarrow \frac{r}{0} \geq n \geq r \rightarrow D_f = [r, \infty)$

الف) $n > 0 / 1 - \log_r n > 0 \rightarrow n < r / \Rightarrow D_f = (0, r)$

ب) $n > 0 / 1 + \log_r \frac{n}{r} > 0 \rightarrow 1 + \log_r n > 0 \rightarrow \log_r n > -1 \rightarrow n > \frac{1}{r} \rightarrow D_f = \left(\frac{1}{r}, \infty \right)$

الف) $r n - n^2 - r \geq 0 \rightarrow n^2 - r n + r \leq 0 \rightarrow (n-1)(n-r) \leq 0$
 $D_f = [1, r]$ 

ب) $\frac{r n + \delta}{r n + r} \in \mathbb{W} \rightarrow -\frac{r n + \delta}{r n + r} \in \mathbb{W} \rightarrow D_f = \left\{ n / n \in \frac{-r n + \delta}{r n - r}, k \in \mathbb{W} \right\}$

حل المسألة

$$\begin{array}{r} r n^3 + r n^2 - \Lambda n + r \\ - r n^2 + r n^2 \\ \hline \delta n^2 - \Lambda n + r \\ - \delta n^2 + \delta n \\ \hline - \Lambda n + r \end{array} \quad \begin{array}{l} \underline{n-1} \\ r n^2 + \delta n - r \\ \hline n^2 + \delta n - r \\ (n-1)(n+r) \end{array}$$

← حل المسألة

$$\begin{array}{r} r n^3 + r n^2 + \Lambda n + r \\ - r n^3 - r n^2 \\ \hline \Lambda n^2 + \Lambda n + r \\ - \Lambda n^2 - \Lambda n \\ \hline r n + r \end{array} \quad \begin{array}{l} \underline{n+1} \\ r n^2 + \Lambda n + r \\ \hline n^2 + \Lambda n + r \\ (n+1)(n+r) \end{array}$$

← حل المسألة

$$\begin{array}{r} \frac{1}{2} n^3 - r n^2 + r n - 1 \\ - \frac{1}{2} n^3 + r n^2 \\ \hline - \frac{1}{2} n^2 + r n - 1 \\ + \frac{1}{2} n^2 + r n \\ \hline n - 1 \end{array} \quad \begin{array}{l} \underline{n-1} \\ n^2 - \frac{1}{2} n + 1 \end{array}$$

← حل المسألة