

الف) $\frac{(n-1)^2 - n^2}{n(n-1)} \geq 0$ $\frac{1}{2} \quad 1$
 $\rightarrow -2n+1 \geq 0 \rightarrow n \leq \frac{1}{2}$ $D_f = (-\infty) \cup [\frac{1}{2}, 1)$

ب) $\frac{n-2n-2}{n(n+1)} = \frac{-n-2}{n(n+1)}$ $n \neq 0, -1, -\frac{2}{n}, 1, 2$ $D_f = \mathbb{R} - \{-2, -\frac{2}{n}, -1, 0, 1\}$

$\frac{n-2n-2}{n(n+1)} = \frac{-n-2}{n(n+1)}$ $\frac{n+4+n-1}{(n-1)(n+2)}$

الف) $n = -2 \pm \sqrt{4} = \frac{0}{2}$ $\frac{-2}{2} \quad \frac{0}{2}$ $D_f = (-\infty - 1] \cup [2, 0 + \infty)$

ب) $n-1 \geq 0 \rightarrow n \geq 1$ $n - \sqrt{n-1} \geq 0 \rightarrow n \geq \sqrt{n-1} \rightarrow |n| \geq n-1 \rightarrow n \leq 1$

$D_f = [1, 1]$

$n^2 - 1 \geq 0$ $n^2 \geq 1$ $n \geq 1, n \leq -1$ $D_f = (-\infty - 1) \cup (1 + \infty)$

$n^2 - n - 2 \geq 0$ $(n-2)(n+1) \geq 0$ $n \leq -1$ $n \geq 2$

$-n^2 + an + b \geq 0$ $-(n-b)(n+2) = -n^2 - (2-b)n + 2b$

$2b = 2 \rightarrow b = 1$ $2-b = a \rightarrow a = -1$ $a+b = \frac{1}{2} + \frac{1}{2} = 1$

$n \geq 1 \rightarrow n-2 \geq n \rightarrow 2n \geq 2 \rightarrow n \geq 1 \checkmark$ $D_f = [-2, \infty)$

$n < 1 \rightarrow n+2 \geq n \rightarrow n \geq -2 \rightarrow -2 \leq n < 1$

$\frac{\sqrt{r}}{r} + 1$ $r\left(\frac{r}{r} + 1 + \sqrt{r}\right) - r\left(\frac{\sqrt{r}}{r} + 1\right) = \frac{r}{r} + r + r\sqrt{r} - r\sqrt{r} - r = -\frac{1}{r}$	f
$a \neq 1$ $t = \frac{a+1}{a-1} \neq 1 \Rightarrow \frac{\frac{a+1}{a-1} + 1}{\frac{a+1}{a-1} - 1} = (x \rightarrow t+1 = at - a)$ $(a-1)t - a - 1 = 0 \checkmark$ $t = \frac{a+1}{a-1}$ $a \in \mathbb{R} - \{1\}$	y
$f(\sqrt{a^r-1}) = a^r-1 - r\sqrt{a^r-1} = -t \rightarrow a^r-1 - t\sqrt{a^r-1} + t = 0$ $(\sqrt{a^r-1} - r)^r = 0$ $a^r-1 = t \rightarrow a^r = 0 \rightarrow a = \pm\sqrt{0}$	λ
$\left(\frac{1-\cancel{a}+q}{r}\right) \left(\frac{r\cancel{q}+r\cancel{0}+q}{r}\right) = \frac{1 \pm \varepsilon}{r}$	q
$\varepsilon \cos^r u + \Delta \cos u = r_1 \Delta \rightarrow \varepsilon \cos^r u + \Delta \cos u - r_1 \Delta = 0 \xrightarrow{\cos u} \cos^r u + \Delta \cos - 1 \varepsilon = 0$ $\cos u = \frac{1}{r} \rightarrow \varphi_0 \in \varphi_{00}$ $\tan^r u = \frac{1}{r}$ $(\cos u + v)(\cos u - r) = 0$ $\begin{aligned} &\rightarrow -\frac{v}{\varepsilon} \times \\ &\rightarrow \frac{r}{\varepsilon} = \frac{1}{r} \checkmark \end{aligned}$	1.