



فلاح فا

سازمان امور شهرداری

پاسف نامہ
امداد
کن!

اننا و
واعتابله
نقسم: و

Q (Y)

○ (M)



$[2, 4]$

(i)

①

2/

$$= (-3 - 1)$$

1/4

(14)

$$\log_{10} x - 1$$

$$x - \tau \leq$$

$$n \leq 1.$$

Subject:

الف) $y = \frac{w}{x^2+1} \rightarrow x^2+1 > 0 \rightarrow x^2 > -1$ $\times$ $D_f = \mathbb{R}$ (9)

ب) $y = \frac{w}{x^2-1} \rightarrow x^2-1 > 0 \rightarrow x^2 > 1$ $\checkmark$ $D_f = \mathbb{R} - \{-1, 1\}$

ج) $y = \frac{w}{x^2-2} \rightarrow x^2-2 > 0 \rightarrow x^2 > 2$ $\checkmark$ $D_f = \mathbb{R} - \{\pm\sqrt{2}\}$

د) $y = \frac{w}{x^2-3} \rightarrow x^2-3 > 0 \rightarrow x^2 > 3$ $\checkmark$ $D_f = \mathbb{R} - \{\pm\sqrt{3}\}$

الف) $y = (x+1)!$ $\times$ $x+1 \in \mathbb{N} \rightarrow x = \frac{n-1}{2} \rightarrow D_f = \{n \mid n = \frac{k-1}{2}, k \in \mathbb{N}\}$ (10)

ب) $y = \left(\frac{wx-1}{x-\omega} \right)!$ $\rightarrow$
 $x-\omega \neq 0$
 $x \neq \omega$
 $\frac{wx-1}{x-\omega} \in \mathbb{N}$
 $x \neq \frac{\omega}{w}$

$wx-1 = (x-\omega)n \rightarrow x(w-n) = \omega n - 1 \rightarrow x = \frac{\omega n - 1}{w-n}$

$D_f = \left\{ n \mid \frac{\omega n - 1}{w-n} \in \mathbb{N} \right\}$

$-1 \leq n^2 + wn + 1 \leq 1$ $-1 \leq n^2 + wn \leq 0$ $n^2 + wn \leq 0$ $\frac{-w}{2} \leq n \leq 0$

$n^2 + wn + 1 \geq 0$ $(n+w)(n+1) \geq 0$ $\frac{-w}{2} \leq n \leq 0$

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