

$$D_f(u) = [-1, 1]$$

(1)

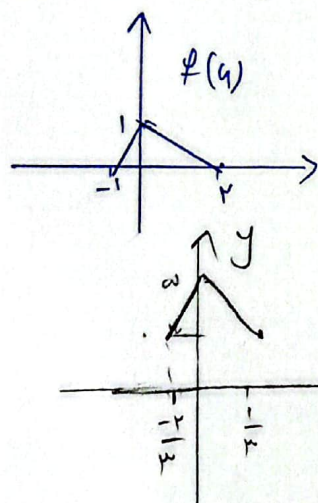
$$f\left(\frac{u_n+r}{\omega}\right) \rightarrow -1 \leq \frac{u_n+r}{\omega} \leq 1 \rightarrow -1 \leq u_n+r \leq \omega \rightarrow -1 \leq x \leq \omega$$

$$f(u_n-r) \cap_f = [-r, \mu] \rightarrow \begin{aligned} \psi x - r - r &= -1 \\ \psi x \mu - r &= \omega \end{aligned} \rightarrow D = [-1, \omega]$$

(2)

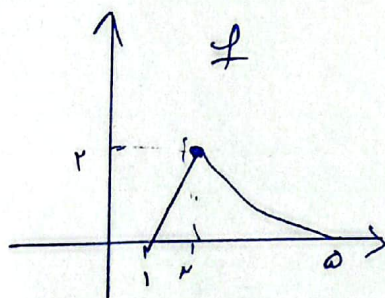
$$f\left(\frac{u_n+1}{\nu}\right) D = [-1, \mu] \rightarrow -1 \leq x \leq \mu \xrightarrow{x \cdot 1/\omega} -1/\omega \leq 1/\omega \leq \mu/\omega \xrightarrow{+ \omega/\omega} -1 \leq \nu - \omega \leq \omega \rightarrow -\omega \leq -\omega x \leq \mu \xrightarrow{\div -\omega} \frac{\mu}{\omega} \geq x \geq \frac{\mu}{\omega}$$

(3)

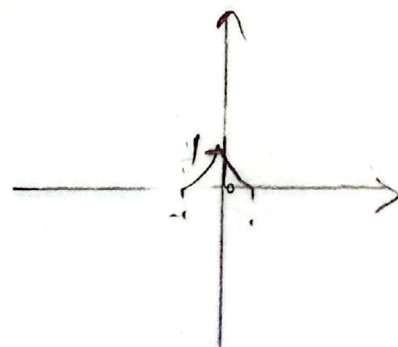


$$\begin{aligned} -1 \leq x \leq 1 &\xrightarrow{\frac{1}{\omega} \cdot x} -1/\omega \leq x \leq 1/\omega \xrightarrow{x \cdot \frac{1}{\mu}} \frac{-r}{\mu} \leq \frac{x}{\mu} \leq \frac{1}{\mu} \\ \mu \Rightarrow 0 < y \leq 1 &\xrightarrow{x \cdot \frac{1}{\mu}} 0 \leq \frac{y}{\mu} \leq 1 \rightarrow \mu \leq y + \mu < \omega \end{aligned}$$

(4)

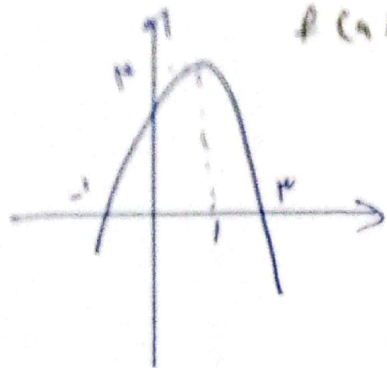


$$\begin{aligned} -1 \leq x \leq \omega &\xrightarrow{\frac{1}{\omega} \cdot x} -1/\omega \leq x \leq 1 \xrightarrow{x \cdot \frac{1}{\mu}} \frac{-r}{\mu} \leq \frac{x}{\mu} \leq \frac{1}{\mu} \\ 0 < y \leq \mu &\xrightarrow{x \cdot \frac{1}{\mu}} 0 \leq \frac{y}{\mu} \leq 1 \end{aligned}$$



$$y = \frac{1}{a}x^2 + \frac{1}{b}x + 1$$

$$3 = \frac{1}{a}(n-1)^2 + \frac{1}{b} \rightarrow \frac{1}{a}(n-1)^2 = -\frac{1}{b} \rightarrow |n-1| = \sqrt{-\frac{a}{b}} \quad \begin{cases} n=5 \\ n=1 \end{cases}$$



$$f(x) = a(x-1)^2 + 4$$

$$0 = f(0) + 4 \rightarrow a = -1 \rightarrow -x^2 + 2x + 4 \rightarrow \frac{1}{x}$$

... $\frac{1}{x}$... $y = \frac{1}{x}$...

$$\left| \frac{1}{x} \right| \xrightarrow{\frac{1}{x}} \left| \frac{1}{x} \right| \xrightarrow{\frac{1}{x}} \left| \frac{1}{x} \right|$$

$$\left| \frac{1}{x} \right| \xrightarrow{\frac{1}{x}} \left| \frac{1}{x} \right| \xrightarrow{\frac{1}{x}} \left| \frac{1}{x} \right| \rightarrow \frac{1}{x} = \frac{1}{x}$$

$$D_f = (a, b], D_g = [-r, a) \quad \oplus = f(n+1) + g(a+1) \quad D_g = (-r, a)$$

$$(a+1, a] \cap [-r, b-1] = (-r, a) \rightarrow a+1 = -r \rightarrow a = -r-1 \quad b-1 = a \rightarrow b = r$$

$$a-b = -9$$

$$D_g = [-r, a] \rightarrow -r \leq x \leq a \rightarrow \frac{1}{r} \leq \frac{x}{r} + 1 \leq \frac{a}{r} \quad , D_f = [-1, r] \rightarrow -1 \leq y \leq r$$

$$0 \leq \sqrt{r} f(x) - w \leq \sqrt{a} \rightarrow D_f = [0, \sqrt{a}]$$

$$f(x) = \left| \frac{x+1}{x+1} \right| \quad f(x) = \left| \frac{x+1}{x+1} \right| \xrightarrow{\frac{1}{x}} \left| \frac{x-r+1}{x(r-x)+1} \right| + 1 \rightarrow g(x) = \left| \frac{-1+x}{-r+x} \right| + 1$$

$$g(x) + x < 0 \rightarrow x + \left| \frac{x-1}{x-r} \right| + 1 < 0 \rightarrow x+1 < 0 \rightarrow x < -1 \rightarrow x-1 < -r \rightarrow x-r < -a$$

$$x + g(x) < 0 \rightarrow x+1 + \left| \frac{x-1}{x-r} \right| < 0 \rightarrow x+1 + \frac{x-1}{x-r} > 0 \rightarrow \frac{(x^2-r)x}{-r+x} < 0$$

$$-r+x > 0 \rightarrow \frac{-r+x}{-r+x} \rightarrow \frac{1}{1} \rightarrow \frac{1}{1} \rightarrow (-\infty, -r)$$