

۱	$-1 < \frac{x+2}{\omega} < 4 \rightarrow -1 < x+2 < 4\omega \rightarrow -3 < x < 4\omega - 2 \rightarrow -3 < x < 4$ $D_f = [-3, 4]$
۲	$P(x, y) \rightarrow D_{f(x, y)} [-5, 3] \xrightarrow{y=2} D_{f(x)} = [-1, 7]$
۳	$-1 < x < 3 \rightarrow -3 < x+1 < 4 \rightarrow -2 < x+1 < 1 \rightarrow -1 < \frac{x+1}{2} < \omega$ $D_f = [-1, \omega]$ $-1 < \frac{x}{\omega} < \omega \rightarrow -\omega < x < \omega \rightarrow -\frac{\omega}{2} < x < \frac{\omega}{2}$ $D_{f(x, \omega)} = \left[-\frac{\omega}{2}, \frac{\omega}{2} \right]$
۴	$(-1, 0) \rightarrow \left(\frac{1}{\sqrt{2}}, 3 \right)$ $(0, 1) \rightarrow \left(\frac{1}{\sqrt{2}}, \omega \right)$ $(1, 0) \rightarrow \left(\frac{1}{\sqrt{2}}, 3 \right)$
۵	$(1, 0) \rightarrow \left(\frac{1}{\sqrt{2}}, 0 \right)$ $(0, 1) \rightarrow (0, 1)$ $(1, 0) \rightarrow (-1, 0)$

$$a) \left(\frac{x}{w}, \frac{y}{v} \right)$$

$$y = \frac{1}{v} \left(\frac{x}{w} - \frac{y}{v} \right) + 1 \rightarrow y = \frac{1}{v} \left(\frac{x}{w} - \frac{y}{v} + \frac{v}{v} \right) \quad (6, 1) \quad y = \frac{1}{v} \left(\frac{x}{w} + \frac{v}{v} \right) = \left\langle \frac{x+v}{w} \right\rangle$$

$$x=1 \Rightarrow x_{n-1}=1 \rightarrow x_n=1 \rightarrow x = \frac{1}{v}$$

$$y = \frac{1}{v}$$

$$B = \frac{1}{v} \left(\frac{x}{w} + \frac{v}{v} \right) = \frac{1}{v} \rightarrow B = \frac{1}{v}$$

$$aB = \frac{1}{v} x - v = \frac{1}{v}$$

$$f(x) \rightarrow a \leq x-1 < x-a+1, x < a$$

$$a+1=x \rightarrow a=x$$

$$g(x+1) \rightarrow -1 \leq x+1 \leq b \rightarrow -x \leq x \leq b-1$$

$$b-1=a \rightarrow b=x$$

$$a-b=-1$$

$$f(x) \rightarrow y_1 = f\left(\frac{x}{v}+1\right) \rightarrow D_{y_1} = [r, a] \quad x(x) \leq w \rightarrow \frac{x}{v} \leq \frac{w}{v} \rightarrow \frac{1}{v} \leq \frac{x}{v}+1 \leq \frac{w}{v}+1$$

$$D_f = \left[\frac{1}{v}, \frac{w}{v} \right]$$

$$D_f = D_{y_1}$$

$$f(x) \rightarrow y_1 = f\left(\frac{x}{v}+1\right), R_{y_1} = [-1, v] \quad R_{y_1} = R(x)$$

$$-1 \leq f(x) \leq v \rightarrow -x \leq f(x) \leq v$$

$$-1 \leq (x f(x) - x) \leq w \rightarrow R_{y_1} = [0, w] \quad -w \leq (x f(x) - x) \leq 1$$

$$f(x) = \frac{(x-1)+1}{(x-1)+1} = \frac{x-1}{x-1} \rightarrow g(x) = \frac{x-1}{x-1} + 1 = \frac{x-1}{x-1}$$

$$1 + g(x) \rightarrow x + \frac{x-1}{x-1} \rightarrow x + \frac{(x-1) + x-1}{x-1} \rightarrow \frac{x^2-1}{x-1} \rightarrow \frac{(x-1)(x+1)}{x-1}$$

$$\frac{x^2-1}{x-1} = x+1$$