

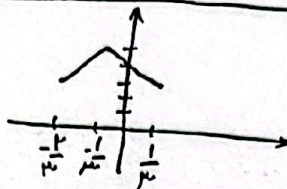
$$① D_{f(x)} = [-2, 4] \rightarrow -2 \leq x \leq 4 \rightarrow -1 \leq 3x+2 \leq 14 \rightarrow -5 \leq x \leq 4 \rightarrow D_f = [-5, 4]$$

$$② D_{f(3x-2)} = [-2, 3] \rightarrow -2 \leq 3x-2 \leq 3 \rightarrow -2 \leq 3x \leq 5 \rightarrow -1 \leq x \leq \frac{5}{3} \rightarrow D_f = [-1, \frac{5}{3}]$$

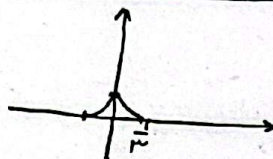
$$③ D_{f(\frac{3x+1}{2})} = [-1, 2] \rightarrow -1 \leq \frac{3x+1}{2} \leq 2 \rightarrow -2 \leq 3x+1 \leq 4 \rightarrow -3 \leq 3x \leq 3 \rightarrow -1 \leq x \leq 1 \rightarrow D_f = [-1, 1]$$

$$D_{f(2-\omega x)} = [-1, 2] \rightarrow -1 \leq 2-\omega x \leq 2 \rightarrow -3 \leq -\omega x \leq 0 \rightarrow \frac{3}{\omega} \leq x \leq \frac{0}{\omega} \rightarrow D_f = [\frac{3}{\omega}, 0]$$

$$④ \begin{aligned} (-1, 0) &\rightarrow 3x+1 = -1 \rightarrow (-\frac{2}{3}, 0) \\ (0, 1) &\rightarrow 3x+1 = 0 \rightarrow (-\frac{1}{3}, 1) \\ (1, 2) &\rightarrow 3x+1 = 2 \rightarrow (\frac{1}{3}, 2) \end{aligned}$$



$$⑤ \begin{aligned} (1, 0) &\rightarrow 2-3x = 1 \rightarrow (\frac{1}{3}, 0) \\ (2, 1) &\rightarrow 2-3x = 2 \rightarrow (0, 1) \\ (3, 0) &\rightarrow 2-3x = 3 \rightarrow (-1, 0) \end{aligned}$$



$$⑥ \text{ (scribbled out) }$$

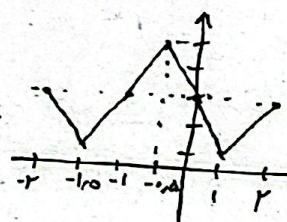
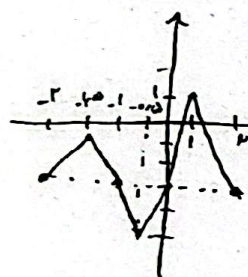
$$⑦ (1, \varepsilon) \rightarrow 3\alpha+2=1 \rightarrow \alpha = -\frac{1}{3} \left. \begin{aligned} 1-2(\varepsilon) &= \beta > -\varepsilon \\ \alpha, \beta &= -\frac{1}{3}, -\varepsilon \end{aligned} \right\} \rightarrow D_f = [-\frac{1}{3}, -\varepsilon]$$

$$⑧ \left. \begin{aligned} D_{f(x-1)} &= (a+1, \omega) \\ D_{g(x+1)} &= [-2, b-1] \end{aligned} \right\} \begin{aligned} a+1 &= -2 \rightarrow a = -3 \\ b-1 &= \omega \rightarrow b = \omega+1 \end{aligned} \rightarrow a-b = -3 - (\omega+1) = -4-\omega$$

$$⑨ f(\frac{x}{2}+1) \rightarrow D_{f(x)} = [-2, 2]$$

$$\hookrightarrow D = [-2, \omega] \rightarrow [-\varepsilon, \varepsilon] \rightarrow [-2, 2]$$

$$R_{f(x)} = [-1, 2] \xrightarrow{\times 2} [-2, 4] \xrightarrow{-2} [-4, 2]$$



$$\sqrt{\quad} \rightarrow R = [1, \sqrt{\omega}]$$

$$D = [-2, 2]$$

$$⑩ g(x) = \left| \frac{(x-1)t}{2(x-1)+1} + 1 \right| = \left| \frac{3x-1}{2x-1} \right| \quad x + \left| \frac{3x-1}{2x-1} \right| < 0$$

