

$\lim_{x \rightarrow \frac{1}{2}} \left \frac{-\frac{1}{x}}{-\frac{1}{x^2}} \right \rightarrow \left \frac{\frac{1}{x}}{\frac{1}{x^2}} \right $	$\lim_{x \rightarrow \frac{1}{2}} \left\{ \frac{\frac{1}{x} + \frac{1}{x}}{\frac{1}{x^2} + \frac{1}{x^2}} \right\} \rightarrow f(x) = \frac{1}{x} + \frac{1}{x} \rightarrow f\left(\frac{1}{2}\right) = 2$	۶ (۲)
$-\frac{1}{2}\left(x - \frac{1}{2}\right)^2 + \frac{1}{2}\left(x - \frac{1}{2}\right) + 1 + \frac{1}{2} = -\frac{(x-1/2)^2 + 1}{2} \Rightarrow (x-1/2)^2 = 1 \Rightarrow x_1 = 1, x_2 = 0$	$\lim_{x \rightarrow 1} \left \frac{1}{x} \right \rightarrow \frac{1}{1} = 1$	۷ (۲)
$D_f = (a+1, 5], D_g = [-2, b-1)$	$D_f \cap D_g = (-2, 5) \Rightarrow a+1 < -2 \Rightarrow a < -3 \text{ and } b-1 > 5 \Rightarrow b > 6$	۸ (۲)
$D_f \Rightarrow \sqrt{x} \leq 5 \Rightarrow x \leq 25 \Rightarrow D_f = [0, 25]$	$D_g \Rightarrow \sqrt{x} \leq 5 \Rightarrow x \leq 25 \Rightarrow D_g = [0, 25]$	۹ (۲)
$\left \frac{x+1}{x^2+1} \right = \left 1 + \frac{-x}{x^2+1} \right $	$f(x) \Rightarrow G(x) = \left 1 + \frac{x(x-1)}{x^2+1} \right + 1$	۱۰ (۲)

$$D_f = [-r, r] \rightarrow -r \leq \frac{r_n + r}{\Delta} \leq r \rightarrow -1 \leq r_n + r \leq 1 \rightarrow -r \leq n \leq r$$

$$D_g = [-r, r]$$