

$[n] > \epsilon \rightarrow n, \omega \rightarrow f(n), f(n+1) \rightarrow f(n) - n + 1 \approx n \xrightarrow{n \gg \epsilon} \frac{n}{\epsilon} \approx \frac{1}{\epsilon}$ (2)
 $[n] \leq \epsilon \rightarrow \dots \rightarrow f(n) = f(n+1) - n + 1 \approx f(n+1), \dots \rightarrow n \gg -\frac{\epsilon}{2} \rightarrow -\frac{\epsilon}{2} < n \leq \dots$ (2)

$\Rightarrow D_y = [-\frac{\epsilon}{2}, +\infty)$ (2)
 $\frac{x^2(n+1) - (n+1)}{x^2 - 1} \approx \frac{(n+1)(n-1)}{x^2 - 1} \xrightarrow{x \rightarrow 1} \dots$ (2)
 $\Rightarrow n+1 \xrightarrow{x \rightarrow 1} y = 1$
 $\frac{x^2(n^2 + 1) + f(n+1)}{(f(n+1))^2} \approx \frac{f(n+1)^2}{(f(n+1))^2} = \frac{1}{f(n+1)}$ (2)
 $D_f = \mathbb{R} - \left\{ \frac{1}{f} \right\}$

$\rightarrow a+b \approx \dots \left\{ \begin{array}{l} b \approx \dots \\ -a \approx b-1 \end{array} \right. \Rightarrow a \approx b$ (2)
 $1+b \approx 2 \Rightarrow b \approx 1$ (2)
 $-1+b \approx 1 \Rightarrow b \approx 2$ (2)
 $\Rightarrow a+b \approx (2+1) \approx 3$ (2)

$f(n+1) = (n-1)^2(n) \approx (n^2 - 2n + 1)n \approx n^3 - 2n^2 + n$ (2)
 $f(1-n) = (-n-1)^2(-n) \approx -n^3 - 2n^2 - n$ (2)
 $g(n) = n^3 - 2n^2 + n + \dots \approx -1$ (2)
 $\Rightarrow a+b \approx (2+1) \approx 3$ (2)

$f(n) = (n-1)^2 + (n-1) \approx n^2 - 2n + 1 + n - 1 \approx n^2 - n$ (2)
 $f(1-n) = (1-n)^2 + (1-n) \approx 1 - 2n + n^2 + 1 - n \approx n^2 - 3n + 2$ (2)
 $\Rightarrow f(n) + f(1-n) \approx 0$ (2)

$f(g(n)) = -K \leq 2K \Rightarrow K \approx 4$ (2)
 $\Rightarrow \left(\frac{a-b}{2} - K \right) \approx \frac{1}{2} + 1 \approx \frac{3}{2}$ (2)

$D_g \Rightarrow f(n) > 0 \rightarrow n > 1 \Rightarrow D_g = [-1, +\infty) \Rightarrow D_f = (-\infty, 1] \Rightarrow m - 1 \geq 0 \Rightarrow m \geq 1$ (2)
 $f(x) = \sqrt{1-x} \approx 1 - \frac{x}{2}$
 $g(x) = \sqrt{1+x} \approx 1 + \frac{x}{2}$
 $\Rightarrow m+n \approx \sqrt{1-x} + \sqrt{1+x} \approx 2$ (2)