

$x > 0, x \neq 1 \Rightarrow \log_n x > 0 \Leftrightarrow x > \frac{1}{n}$ $\log_n x > 0 \rightarrow \log_n x = 0 \rightarrow x = \frac{1}{n}$ (الف)
 $\log_n x > 0 \Rightarrow x > 1 \Rightarrow \log_n x > 0 \rightarrow x > 1$
 $\log_n x > 0 \Rightarrow 0 < x < 1 \Rightarrow \log_n x < 0 \Rightarrow 0 < x < \frac{1}{n}$
 $\sqrt{|x|} \rightarrow |x| > 0$ $\sqrt{|x|} - |x| \neq -4 \Rightarrow x^2 + 4 = 0$ (ب)
 $D = \mathbb{R} - \{9, -9\} \rightarrow \sqrt{|x|} \neq -\sqrt{x} \rightarrow \sqrt{|x|} \neq \sqrt{x} \rightarrow x \neq 9, -9$

$x + b \neq 0$
 $x \neq -b$
 $b = -x$

$[x] > x \rightarrow \omega < x \rightarrow \sqrt{x^2 - x + 1} \rightarrow x > 0 \rightarrow x > \omega$
 $[x] \leq x \rightarrow x < \omega \rightarrow \sqrt{x^2 + x - 2} \rightarrow x + 1 > 0 \rightarrow x > -\frac{1}{2}$
 $D = [-\frac{1}{2}, +\infty)$ $-\frac{1}{2} \leq x < \omega$

$$\frac{n(\sqrt[n]{n+1} + (\sqrt[n]{n+1} + 1))}{((\sqrt[n]{n+1}))^n} = n \frac{(\sqrt[n]{n+1})^n}{(\sqrt[n]{n+1})^n} \sim \frac{n}{\sqrt[n]{n+1}}$$
 $n+1 \neq 0$
 $x \neq -\frac{1}{n}$

$\sqrt[n]{n} - a > 0 \rightarrow x > \frac{a}{n}$
 $1 - \log_{10} \sqrt[n]{n} > 0 \rightarrow \log_{10} 1 > \log_{10} \sqrt[n]{n} \rightarrow 0 > \log_{10} \sqrt[n]{n}$
 $D \rightarrow \frac{a}{n} < x \leq \frac{10+a}{n} \rightarrow [\frac{a}{n}, \frac{10+a}{n}]$
 $x \leq \frac{10+a}{n}$
 $C-b = \frac{10+a}{n} - \frac{a}{n} = \frac{10}{n}$