

$$\textcircled{1} -x^+ \rightarrow 0 \quad x-a=0$$

$$\textcircled{2} -x^- \rightarrow x-a \Rightarrow a=x$$

$$\textcircled{3} \left[\frac{a}{x} \right] = \left[\frac{x}{x} \right] = \textcircled{0}$$

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$$\textcircled{1} \lim [x \times (\frac{1}{x})^- - 1] = \lim [0^-] = \textcircled{-1}$$

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$$\textcircled{1} \lim [\wedge(-\frac{1}{x}) + \frac{1}{x}] = \textcircled{-1}$$

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$$\textcircled{1} \lim_{x \rightarrow (\frac{1}{x})^-} \frac{\log x - \infty + [\frac{x}{x}]}{19x - [-\frac{x}{x}]} = \lim_{x \rightarrow (\frac{1}{x})^-} \frac{\log x - \infty + 1}{19x + 1} = \frac{\log x + \frac{1}{x}}{19x + 1} = \frac{\textcircled{0}}{\textcircled{0}} = \frac{1}{0^-} = \textcircled{-\infty}$$

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$$\lim_{x \rightarrow 1^+} \frac{1 - \cos^2 \pi x}{1 + \cos \pi x} = \frac{(1 - \cos \pi x)(1 + \cos \pi x)}{1 + \cos \pi x} = 1 - \cos \pi x$$

$$\lim_{x \rightarrow 1^+} 1 - \cos \pi x = \textcircled{2}$$

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