

$$\begin{aligned}
 4. \quad & \lim_{x \rightarrow -\infty} \frac{x^2 - 2}{x - x^2} \\
 &= \lim_{x \rightarrow -\infty} \frac{1 - \frac{2}{x^2}}{\frac{1}{x} - 1} = \frac{1}{-1} = -1
 \end{aligned}$$