

$$\begin{aligned}
 3. \quad & \lim_{x \rightarrow \infty} \frac{3x^3 - 5x^2 + 7}{8 + 2x - 5x^3} \\
 &= \lim_{x \rightarrow \infty} \frac{3 - \frac{5}{x} + \frac{7}{x^3}}{\frac{8}{x^3} + \frac{2}{x^2} - 5} = -\frac{3}{5}
 \end{aligned}$$