

80

$$\lim_{x \rightarrow +\infty} \frac{\sqrt[3]{x^3 + 2x^2 - x + 5} + 3x^2 + e^{-x}}{\sqrt{x^4 - x^3 + x + 1} - 2\sqrt{x} + \log x} =$$

$$= \lim_{x \rightarrow +\infty} \frac{x \sqrt[3]{\frac{1}{x} + \frac{2}{x} - \frac{1}{x^2} + \frac{5}{x^3}} + 3x^2 + e^{-x}}{x^2 \sqrt{1 - \frac{1}{x} + \frac{1}{x^2} + \frac{1}{x^4}} - 2\sqrt{x} + \log x} =$$

$$= \lim_{x \rightarrow +\infty} \frac{\frac{1}{x} \sqrt{1 + \frac{2}{x} - \frac{1}{x^2} + \frac{5}{x^3}} + 3 + \frac{1}{x^2 e^x}}{\sqrt{1 - \frac{1}{x} + \frac{1}{x^2} + \frac{1}{x^4}} - 2\sqrt{\frac{x}{x^4}} + \frac{\log x}{x^2}} =$$

$$= \frac{0 + 3 + 0}{1 - 0 + 0} = 3$$