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$$\lim_{x \rightarrow +\infty} \frac{\log(x^3 - 5x^2 + x + 1) + \sqrt{\log x + 2}}{\log(2x^3 + 7x^2 - x - 4) + e^{-2x}} =$$

$$= \lim_{x \rightarrow +\infty} \frac{3 \log x + \log\left(1 - \frac{5}{x} + \frac{1}{x^2} + \frac{1}{x^3}\right) + \sqrt{\log x + 2}}{3 \log x + \log\left(2 + \frac{7}{x} - \frac{1}{x^2} + \frac{4}{x^3}\right) + e^{-2x}}$$

$$= \lim_{x \rightarrow +\infty} \frac{1 + \frac{\log\left(1 - \frac{5}{x} + \frac{1}{x^2} + \frac{1}{x^3}\right)}{3 \log x} + \sqrt{\frac{1}{9 \log x} + \frac{2}{9 \log^2 x}}}{1 + \frac{\log\left(2 + \frac{7}{x} - \frac{1}{x^2} + \frac{4}{x^3}\right)}{3 \log x} + \frac{1}{3e^{2x} \log x}}$$

$$= \lim_{x \rightarrow +\infty} \frac{1 + \frac{\log\left(1 - \frac{5}{x} + \frac{1}{x^2} + \frac{1}{x^3}\right)}{3 \log x} + \sqrt{\frac{1}{9 \log x} + \frac{2}{9 \log^2 x}}}{1 + \frac{\log\left(2 + \frac{7}{x} - \frac{1}{x^2} + \frac{4}{x^3}\right)}{3 \log x} + \frac{1}{3e^{2x} \log x}}$$

$$= 1$$