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

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

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

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

$$= e \cdot \frac{2}{e} \cdot 1 = 2$$

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