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$$\lim_{x \to +\infty} \frac{2x^3 \operatorname{tgh} x + 5x^2 + 1}{3x^4 + 7x + 8} \log \operatorname{senh} x =$$

$$= \lim_{x \to +\infty} \frac{2x^3 \operatorname{tgh} x + 5x^2 + 1}{3x^4 - 7x + 8} \log \left(\frac{e^x - e^{-x}}{2} \right) =$$

$$= \lim_{x \to +\infty} \frac{2x^3 \operatorname{tgh} x + 5x^2 + 1}{3x^4 + 7x + 8} \left[\log e^x + \log \left(\frac{1 - e^{-2x}}{2} \right) \right] =$$

$$= \lim_{x \to +\infty} \frac{2x^4 \operatorname{tgh} x + 5x^3 + x}{3x^4 - 7x + 8} + \frac{2x^3 \operatorname{tgh} x + 5x^2 + 1}{3x^4 - 7x + 8} \log \left(\frac{1 - e^{-2x}}{2} \right) =$$

$$= \frac{2}{3}$$