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$$\lim_{x\to+\infty} \frac{x-5}{3x^2+1} \log \operatorname{sen} e^{\frac{1-2x^3}{x^2+5}} =$$

$$= \lim_{x\to+\infty} \frac{x-5}{3x^2+1} \log \frac{\operatorname{sen} e^{\frac{1-2x^3}{x^2+5}}}{e^{\frac{1-2x^3}{x^2+5}}} \cdot e^{\frac{1-2x^3}{x^2+5}} =$$

$$= \lim_{x\to+\infty} \frac{x-5}{3x^2+1} \left[\log \frac{\operatorname{sen} e^{\frac{1-2x^3}{x^2+5}}}{e^{\frac{1-2x^3}{x^2+5}}} + \frac{1-2x^3}{x^2+5} \right] =$$

$$= \lim_{x\to+\infty} \frac{x-5}{3x^2+1} \log \frac{\operatorname{sen} e^{\frac{1-2x^3}{x^2+5}}}{e^{\frac{1-2x^3}{x^2+5}}} +$$

$$+ \frac{x-5}{3x^2+1} \cdot \frac{1-2x^3}{x^2+5} =$$

$$= 0 + \lim_{x\to+\infty} \frac{-2x^4 + \dots}{3x^4 + \dots} = -\frac{2}{3}$$