

100

$$\lim_{x \rightarrow -\infty} \frac{e^{-x} + x^4 + 5x^3 - 7\cos x + 2}{e^{-x-1} + 2x^5 + \arctan x + 1} =$$

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

$$1 + 0 + 5 \cdot 0 - 7 \cdot 0 + 0$$

$$= \frac{1 + 0 + 0 + 0}{e} = e$$