(186)

$$\lim_{x\to+\infty} e^{\frac{1}{x}}\sqrt{x^2+x+1} - \sqrt{x^2+2x+5} =$$

$$= \lim_{x\to+\infty} e^{\frac{1}{x}}\sqrt{x^2+x+1} - \sqrt{x^2+x+1} + \sqrt{x^2+x+1} - \sqrt{x^2+2x+5}$$

$$= \lim_{x\to+\infty} \sqrt{x^2+x+1}\left(e^{\frac{1}{x}}-1\right) + \sqrt{x^2+x+1} - \sqrt{x^2+2x+5} =$$

$$= \lim_{x\to+\infty} \frac{\sqrt{x^2+x+1}}{x}\,\frac{e^{\frac{1}{x}}-1}{\frac{1}{x}} + \frac{x^2+x+1-x^2-2x-5}{\sqrt{x^2+x+1}+\sqrt{x^2+2x+5}} =$$

$$= 1 + \lim_{x\to+\infty} \frac{-x-4}{x\left(\sqrt{1+\frac{1}{x}+\frac{1}{x^2}}+\sqrt{1+\frac{2}{x}+\frac{5}{x^2}}\right)} = \frac{1}{2} - 1 = \frac{1}{2}$$