854

$$\lim_{x\to 0} \frac{1}{x}\left(e^x\sqrt{x^2+x+1} - \frac{\sqrt{5x^2+2x+1}}{1+x}\right) =$$

$$= \lim_{x\to 0} \frac{e^x(1+x)\sqrt{x^2+x+1} - \sqrt{5x^2+2x+1}}{x(1+x)} =$$

$$= \lim_{x\to 0} \frac{\left[e^x(1+x)\sqrt{x^2+x+1} - \sqrt{5x^2+2x+1}\right]\left[e^x(1+x)\sqrt{x^2+x+1} + \sqrt{5x^2+2x+1}\right]}{x(1+x)\left[e^x(1+x)\sqrt{x^2+x+1} + \sqrt{5x^2+2x+1}\right]} =$$

$$\left\{(1+0)\left[e^0(1+0)\sqrt{0+0+1} + \sqrt{0+0+1}\right] = 1(1+1) = 2\right\}$$

$$= \frac{1}{2}\lim_{x\to 0} \frac{e^{2x}(1+x)^2(x^2+x+1) - 5x^2 - 2x - 1}{x} =$$