

Task 4, part 1)

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

$$u) \lim_{x \rightarrow +0} \frac{5^x - 1}{x} = \log 5 = 1,609437$$

$$g) \lim_{x \rightarrow +\infty} \frac{\ln(x^2 - x + 1)}{\ln(x^{10} + x + 1)} = \frac{1}{5}$$