



Vypočítejte limity:

1. $\lim_{x \rightarrow -1} \left(\frac{x^2 - 2x - 3}{x^3 + x^2 - 2x - 2} \right) =$ [4]
2. $\lim_{x \rightarrow -1} \left(\frac{x + 1}{\sqrt{10 + x} - 3} \right) =$ [6]
3. $\lim_{x \rightarrow 0} \left(\frac{\sin 5x}{4x} + \frac{\sin 2x}{3x} \right) =$ [23/12]
4. $\lim_{x \rightarrow 0} \left(\frac{1 - \cos^4 x}{x^2} \right) =$ [2]
5. $\lim_{x \rightarrow 1} \left(\frac{1}{x^2 - 1} - \frac{2}{x^4 - 1} \right) =$ [1/2]
6. $\lim_{x \rightarrow 2} \left(\frac{x^4 - 16}{x^2 + 7x - 18} \right) =$ [32/11]
7. $\lim_{x \rightarrow +\infty} (x^3 - 5x + 7) =$ [$+\infty$]
8. $\lim_{x \rightarrow +\infty} \left(\frac{2x^2 - 5x + 1}{-3x + 2} \right) =$ [$-\infty$]
9. $\lim_{x \rightarrow +\infty} (\sqrt{x - 4} - \sqrt{x}) =$ [0]
10. $\lim_{x \rightarrow 0} \left(\frac{\sin 4x}{\sqrt{x + 1} - 1} \right) =$ [8]
11. $\lim_{x \rightarrow \frac{\pi}{4}} \left(\frac{\sin x - \cos x}{1 - \operatorname{tg} x} \right) =$ [$-\sqrt{2}/2$]



12. $\lim_{x \rightarrow 0} \left(\frac{1 - \cos 2x + \operatorname{tg}^2 x}{\sin^2 x} \right) =$ [3]

13. $\lim_{x \rightarrow \sqrt{3}} \left(\frac{x^4 + x^2 - 12}{x^4 - 2x^2 - 3} \right) =$ [7/4]

14. $\lim_{x \rightarrow +\infty} \left(\frac{x+2}{x} \right)^x =$ [e²]