

Istituzioni di matematica; a.a. 2023/24 - foglio 3

Calcolare i seguenti limiti

1. $\lim_{x \rightarrow 1^+} \frac{x+2}{x-1}$
2. $\lim_{x \rightarrow 2^+} \frac{x^2 - x - 2}{x^2 - 4}$
3. $\lim_{x \rightarrow +\infty} \frac{x^2 + 2x + 3}{x + 8}$
4. $\lim_{x \rightarrow +\infty} \frac{x^2 + 2x + 3}{x^2 + 8}$
5. $\lim_{x \rightarrow +\infty} \frac{x^2 + 2x + 3}{x^3 + 8}$
6. $\lim_{x \rightarrow +\infty} \frac{x + \arctg(x)}{x^2 + 1}$
7. $\lim_{x \rightarrow +\infty} \frac{\sqrt{x^2 + 1}}{x}$
8. $\lim_{x \rightarrow -\infty} \frac{\sqrt{x^2 + 1}}{x}$
9. $\lim_{x \rightarrow 0^+} \frac{\text{sen}(x^3)}{x^2}$
10. $\lim_{x \rightarrow +\infty} (x+2) \text{sen} \left(\frac{1}{x^2 + 1} \right)$