

Calcolare i seguenti limiti

1. $\lim_{x \rightarrow 2} \frac{x^4 - 8x^2 + 16}{x^3 - 8}$
2. $\lim_{x \rightarrow +\infty} \frac{4x^5 + 3x^2 + 7}{2x^5 + 5x + 9}$
3. $\lim_{x \rightarrow +\infty} \frac{x^4 + x^2 + 3x + 1}{2x^2 + 7x}$
4. $\lim_{x \rightarrow 1} \frac{\sqrt{x} - 1}{x - 1}$
5. $\lim_{x \rightarrow +\infty} \frac{3x - 2}{\sqrt{4x - 1} + \sqrt{x + 1}}$
6. $\lim_{x \rightarrow 0} \frac{\sin 3x}{x}$
7. $\lim_{x \rightarrow 0} \frac{\sin 5x}{2x}$
8. $\lim_{x \rightarrow 0^+} \frac{\sqrt{1 - \cos x}}{x}$
9. $\lim_{x \rightarrow 0} \frac{\sin^4 x}{(1 - \cos x)^2}$
10. $\lim_{x \rightarrow \frac{\pi}{2}} \tan x(1 - \sin x)$
11. $\lim_{x \rightarrow 0} \frac{e^x - 1}{\sin x}$
12. $\lim_{x \rightarrow +\infty} \ln(\sqrt{x^2 + 1} - x)$
13. $\lim_{x \rightarrow 0} \frac{e^x - e^{-x}}{e^{2x} - e^{-2x}}$ (suggerimento mettere in evidenza e^{-x} al numeratore e e^{-2x} al denominatore...)