

Esercizi sulle successioni
Corso di studi in Geologia 2018/2019

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1. Si determino, motivando la risposta, i seguenti limiti di successioni:

$$\lim_{n \rightarrow \infty} \frac{n-1}{n+1}, \quad \lim_{n \rightarrow \infty} \frac{n-1}{n^2+1} \quad \lim_{n \rightarrow \infty} \frac{n^2-1}{n+1} \quad \lim_{n \rightarrow \infty} \frac{5n-1}{n^2-3n+1}$$

$$\lim_{n \rightarrow \infty} \frac{(n-1)(n+1)}{n^4+1} \quad \lim_{n \rightarrow \infty} \frac{\sqrt{n}}{n+1} \quad \lim_{n \rightarrow \infty} \frac{n-1}{\sqrt{n+1}} \quad \lim_{n \rightarrow \infty} \frac{5n^2-n-1}{2n^2-5n+7}$$

$$\lim_{n \rightarrow \infty} \left(1 + \frac{3}{2n}\right)^{5n} \quad \lim_{n \rightarrow \infty} \left(1 + \frac{8}{n}\right)^{3n} \quad \lim_{n \rightarrow \infty} \left(1 - \frac{2}{3n}\right)^{n-2} \quad \lim_{n \rightarrow \infty} \left(1 - \frac{1}{7n}\right)^{4n}$$

$$\lim_{n \rightarrow \infty} (2^n - n^2) \quad \lim_{n \rightarrow \infty} \frac{3^n}{n^5} \quad \lim_{n \rightarrow \infty} (n^3 - 7n^2) \quad \lim_{n \rightarrow \infty} (5n^2 - n - 1).$$