

Esercizio 1

Calcolare i limiti delle seguenti successioni

$$\textcircled{1} \frac{2n+3}{3n-7}$$

$$\textcircled{2} \frac{n^3 + 2n^2 - 3n + 2}{2n^5 - n^2 + n + 1}$$

$$\textcircled{3} \sqrt{n^2+2} - n$$

$$\textcircled{4} \frac{n+2}{\sqrt{n^2+n} + \sqrt{n^2+5}}$$

$$\textcircled{5} \frac{n+2}{\sqrt{n^2+n} - \sqrt{n^2+5}}$$

$$\textcircled{6} \sqrt{4n^5 - n^2 + 1} - \sqrt{3n^3 + 2}$$

$$\textcircled{7} \frac{n^4 + 3}{3n^5 - n^2 \cos^2(n) + 5}$$

$$\textcircled{8} \frac{n \sin(n) + \sqrt{n}}{n^3 - n + 2}$$

Esercizio 2

Calcolare i limiti delle seguenti successioni:

$$\textcircled{1} \frac{1 - 3n^2}{(2n + 5)^2}$$

$$\textcircled{2} \frac{1 - 2n}{\sqrt{n} + 1}$$

$$\textcircled{3} \frac{4n + (-1)^n}{n - (-1)^n}$$

$$\textcircled{4} \frac{4n + 2^n}{n^2 - 2^n}$$

$$\textcircled{5} \frac{4n + (-2)^n}{n^2 - (-2)^n}$$

$$\textcircled{6} \sqrt{n+2} - \sqrt{n+1}$$

$$\textcircled{7} \sqrt{n^2 + 5n} - n$$