

gara a squadre sui limiti

Calcola i seguenti limiti

$$1) \lim_{x \rightarrow 1} \frac{3x^3 - 5x^2 + x + 1}{x^2 - 1}$$

$$2) \lim_{x \rightarrow +\infty} \frac{3x^2 - 22x - 45}{4x^3 - 39x^2 + 27x}$$

$$3) \lim_{x \rightarrow 1} \frac{(x^2 - 1)(x^2 + 1)(x^2 - 6x + 5)}{(x - 1)^2(x^2 + 6x + 5)}$$

$$4) \lim_{x \rightarrow -1^+} \frac{(x-1)^3(x+1)^2}{(x^2 - 1)^2(x+1)}$$

$$5) \lim_{x \rightarrow 5} \frac{(x-3)^7(x-9)^4(x-2)}{(x-2)^2(x-9)^5(x-3)^6}$$

$$6) \lim_{x \rightarrow +\infty} \sqrt{9x^4 - 100x} - (3x + 5)(2x - 4)$$

$$7) \lim_{x \rightarrow -\infty} \frac{7x + x^2}{\sqrt{x^4 + 100}}$$

$$8) \lim_{x \rightarrow +\infty} \frac{\sqrt{x^4 - 9x^3} + 15x^2}{5x^2 - 1}$$

$$9) \lim_{x \rightarrow -\infty} \frac{(9 - 4x^3 + 5x - 7x^4)(15x^2 - 1)^2}{\left(2x - \frac{3}{2}\right)^9}$$

$$10) \lim_{x \rightarrow +\infty} \frac{(4x - 5)^4(3 - 2x^2)^8(x^9 - 7x + 12)^{15}}{(1 + x^{22})x^{100}}$$