

Calcula los siguientes límites de funciones:

$$a) \lim_{x \rightarrow 2} \frac{x^2 + 3}{x^2 - 4} =$$

$$c) \lim_{x \rightarrow 3^+} \left[(x) + \frac{1}{x-3} \right] =$$

$$e) \lim_{x \rightarrow 2^+} \left[\frac{1}{x-2} + \frac{1}{x^2 - 4} \right] =$$

$$g) \lim_{x \rightarrow 0^+} \left(\frac{1}{x} - \frac{1}{2x} \right) =$$

$$i) \lim_{x \rightarrow 2} [x^2 \cdot (x+3)] =$$

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

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

$$\tilde{n}) \lim_{x \rightarrow 1} \frac{x^3 + 2x^2 - x - 2}{x^3 - x^2 - x + 1} =$$

$$p) \lim_{x \rightarrow 1} \frac{x^3 - 1}{(x-1)^2} =$$

$$r) \lim_{x \rightarrow \infty} \frac{3x^3 + 2x^2 - 7}{4x^2 - 5x + 6} =$$

$$t) \lim_{x \rightarrow \infty} \frac{3x^3 - 1}{4x^4 + 5x^2} =$$

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

$$x) \lim_{x \rightarrow \infty} \sqrt{x^4 + 2x + 7} =$$

$$z) \lim_{x \rightarrow +\infty} \sqrt{6x+2} =$$

$$ab) \lim_{x \rightarrow \infty} \frac{\sqrt{8x^2 + 2x + 3}}{\sqrt[3]{8x^3 - 5x^2 + 3}} =$$

$$ad) \lim_{x \rightarrow \infty} \frac{x-2}{\sqrt[5]{32x^5 + 8}} =$$

$$af) \lim_{x \rightarrow +\infty} \left(\sqrt{x^4 + 2} - \sqrt{x^3 + 3} \right) =$$

$$ah) \lim_{x \rightarrow 1} (3x-2)^{\frac{x-1}{3x-7}} =$$

$$aj) f(x) = \begin{cases} \frac{x^2 + 2}{x^2 + x - 6} & \text{si } x \neq 2 \\ 3 & \text{si } x = 2 \end{cases} \text{ en } x = 2$$

$$b) \lim_{x \rightarrow 0^+} [(x) + (2x - 5)] =$$

$$d) \lim_{x \rightarrow 3^-} \left[(x) + \frac{1}{x-3} \right] =$$

$$f) \lim_{x \rightarrow 0} \left(\frac{1}{x^2} - \frac{1}{x^4} \right) =$$

$$h) \lim_{x \rightarrow +\infty} (x^2 - x) =$$

$$j) \lim_{x \rightarrow 2^+} \left[(x-4) \cdot \frac{1}{x-2} \right] =$$

$$l) \lim_{x \rightarrow +\infty} \frac{x^2 + 5}{-3} =$$

$$n) \lim_{x \rightarrow 2} \frac{x^2 - x - 2}{x^3 - 2x^2} =$$

$$o) \lim_{x \rightarrow 1} \frac{x^2 + x - 2}{x^2 - 2x + 1} =$$

$$q) \lim_{x \rightarrow +\infty} \frac{-2}{x^2 - 2x + 1} =$$

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

$$u) \lim_{x \rightarrow \infty} \frac{x^6 + 2x^7}{3x^6 + 2} =$$

$$w) \lim_{x \rightarrow \infty} \frac{4x^3 + 2x - 5}{2x^2 + 5x - x^3} =$$

$$y) \lim_{x \rightarrow \infty} \sqrt[3]{-x^5 + 4x + 2} =$$

$$aa) \lim_{x \rightarrow \infty} \frac{\sqrt{x^2 + 2x}}{\sqrt{3x^2 + 2}} =$$

$$ac) \lim_{x \rightarrow \infty} \frac{\sqrt[3]{-3x^3 + 2x - 5}}{\sqrt[3]{2x^2 + 3}} =$$

$$ae) \lim_{x \rightarrow +\infty} \left(\sqrt{x^4 + 2} + \sqrt{x^3 + 3} \right) =$$

$$ag) \lim_{x \rightarrow 5} (3x+2)^{\frac{3x+1}{3x-7}} =$$

$$ai) \lim_{x \rightarrow 0} \left(\frac{7x+10}{2x+5} \right)^{\frac{1}{2x}} =$$

$$ak) f(x) = \begin{cases} \frac{1}{x-1} & \text{si } x \leq 1 \\ x+1 & \text{si } 1 < x < 2 \\ \frac{x^2}{x+3} & \text{si } x \geq 2 \end{cases} \text{ en } x=1 \text{ y en } x=2$$