



**Assunto:** Cálculo de limites de funções

Determine:

$$1. \lim_{x \rightarrow +\infty} (x^2 + 2x - 1)$$

$$2. \lim_{x \rightarrow -\infty} (x^4 - x)$$

$$3. \lim_{x \rightarrow -\infty} [(2x + 3) \times x^2]$$

$$4. \lim_{x \rightarrow +\infty} \frac{1}{x^2 + 3}$$

$$5. \lim_{x \rightarrow -\infty} \frac{x^2 - 5x}{3}$$

$$6. \lim_{x \rightarrow 1} \frac{3}{1 - x}$$

$$7. \lim_{x \rightarrow 2} \frac{-5}{(x - 2)^2}$$

$$8. \lim_{x \rightarrow +\infty} (1 - 3x)^5$$

$$9. \lim_{x \rightarrow +\infty} (x^2 + 2x - 1)$$

$$10. \lim_{x \rightarrow +\infty} \frac{e^x + 1}{3}$$

$$11. \lim_{x \rightarrow +\infty} (1 + \ln x)$$

$$12. \lim_{x \rightarrow -\infty} \frac{e^x + 1}{3}$$

$$13. \lim_{x \rightarrow 0^+} (1 + \ln x)$$

$$14. \lim_{x \rightarrow +\infty} (x^2 - x)$$

$$15. \lim_{x \rightarrow -\infty} (3x^3 - x^2 + 7x)$$

$$16. \lim_{x \rightarrow +\infty} (\sqrt{x+1} - \sqrt{x})$$

$$17. \lim_{x \rightarrow +\infty} (\sqrt{x^2 + 1} - \sqrt{x^2 + 3})$$

$$18. \lim_{x \rightarrow +\infty} \frac{2x^3 + 1}{x^2 + x}$$

$$19. \lim_{x \rightarrow -\infty} \frac{x^2 - x^5}{x^5 + x}$$

$$20. \lim_{x \rightarrow +\infty} \frac{\sqrt{x+1} - \sqrt{x}}{x}$$

$$21. \lim_{x \rightarrow +\infty} \frac{e^x}{2x}$$

$$22. \lim_{x \rightarrow +\infty} \frac{4x}{2^x}$$

$$23. \lim_{x \rightarrow +\infty} \frac{\ln x}{2x}$$

$$24. \lim_{x \rightarrow +\infty} \frac{e^x + 1}{2x}$$

$$25. \lim_{x \rightarrow +\infty} \frac{x}{3 \ln x}$$

$$26. \lim_{x \rightarrow +\infty} \left( \frac{1}{x} \times 3x \right)$$

$$27. \lim_{x \rightarrow -\infty} \left[ \frac{1}{x^2 - 1} \times (x + 1) \right]$$

$$28. \lim_{x \rightarrow -1} \frac{x^3 + 3x^2 + 3x + 1}{x^3 + 1}$$

$$29. \lim_{x \rightarrow 4} \frac{\sqrt{x} - 2}{x - 4}$$

$$30. \lim_{x \rightarrow 3} \frac{x^2 - 5x + 6}{x^2 - 9}$$

$$31. \lim_{x \rightarrow 0} \frac{-3}{x^2}$$

$$32. \lim_{x \rightarrow 2^-} \frac{x - 1}{x - 2}$$

$$33. \lim_{x \rightarrow \frac{1}{2}^+} \frac{x^2 - 2}{2x + 1}$$

$$34. \lim_{x \rightarrow 2} \frac{x^2 - 4}{x - 2}$$