

Lista de Limites

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

$$2) \lim_{x \rightarrow 1} \frac{4x^5 + 9x + 7}{3x^6 + x^3 + 1} = 4$$

$$3) \lim_{x \rightarrow 0} \frac{\sqrt{9 + 5x + 4x^2} - 3}{x} = \frac{5}{3}$$

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

$$5) \lim_{x \rightarrow \infty} 5^{2x/(x+3)} = 25$$

$$6) \lim_{x \rightarrow 0} \frac{\sqrt{x+4} - 2}{x} = \frac{1}{4}$$

$$7) \lim_{x \rightarrow \infty} \frac{x^3 + 2x^2 + 3x + 4}{4x^3 + 3x^2 + 2x + 1} = \frac{1}{4}$$

$$8) \lim_{x \rightarrow 0} \frac{1 - \cos 5x}{x^2} = \frac{25}{2}$$

$$9) \lim_{x \rightarrow 1} \frac{x^3 - 6x^2 + 11x - 6}{x^2 - 3x + 2} = -2$$

$$10) \lim_{x \rightarrow \infty} \frac{2x^4 + 3x^2 + 5x - 6}{x^3 + 3x^2 + 7x - 1} = \infty$$

$$11) \lim_{x \rightarrow 0} \frac{x}{\sqrt[3]{1+x} - 1} = 3$$

$$12) \lim_{x \rightarrow 0} \frac{\ln(1-3x)}{x} = -3$$

$$13) \lim_{x \rightarrow 0} \frac{1-5^x}{1-e^x} = \ln 5$$

$$14) \lim_{x \rightarrow 0} \frac{e^{3x^2+x^3} - 1}{x^2} = 3$$

$$15) \lim_{x \rightarrow 0} \frac{\ln(1+x^7)}{e^{6x^6} - 1} = 0$$

$$16) \lim_{x \rightarrow 0} \frac{1 - \cos^2 x}{1 - \cos x} = 2$$

$$17) \lim_{x \rightarrow 0} \frac{\operatorname{sen}^2 x/4}{x^2} = \frac{1}{16}$$

$$18) \lim_{x \rightarrow 0} \frac{\operatorname{sen}^2 3x}{\ln^2(1+2x)} = \frac{9}{4}$$

$$19) \lim_{t \rightarrow 0} \frac{t^2 \operatorname{sen}^2 t}{t \cdot \operatorname{tg}(t)} = 0$$

$$20) \lim_{x \rightarrow 1} \frac{2x-2}{\sqrt[3]{26+x} - 3} = 54$$

$$21) \lim_{a \rightarrow 0} \frac{\cos(x+a) - \cos x}{a} = -\operatorname{sen} x$$

$$22) \lim_{x \rightarrow a} \frac{\operatorname{sen} x - \operatorname{sen} a}{x - a} = \cos x$$