Cálculo 1

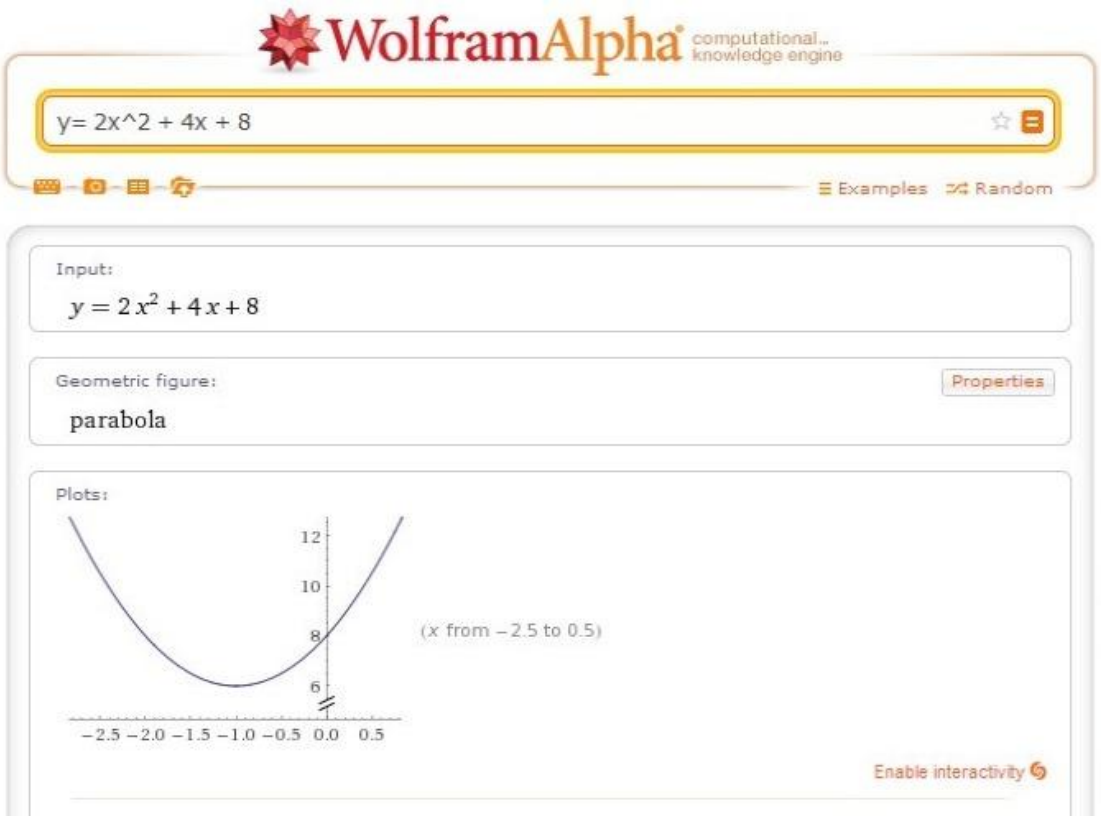
No site **WolframAlpha** podemos resolver os mais variados tipos de expressões matemáticas e também realizar buscas!

Página inicial: http://www.wolframalpha.com

Uma função, por exemplo:

y= 2x^2 + 4x + 8

O site nos retorna: O gráfico da função, a figura geométrica, formas alternativas, as raízes, as derivadas implícitas e o máximo e mínino...



Veja a página completa em:
http://www.wolframalpha.com/input/?i=y%3D+2x%5E2+%2B+4x+%2B+8

Para cálculos específicos:

Limite:

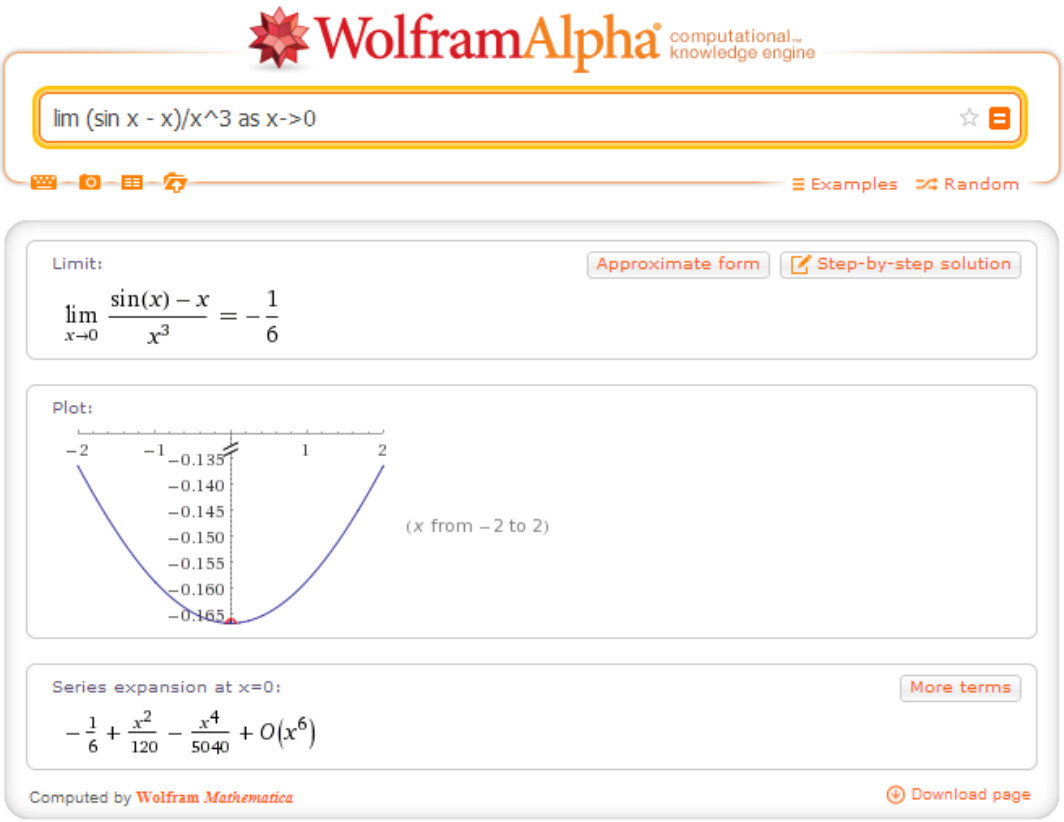
Utiliza-se “lim” ou “limit”

Exemplos:

$$\lim_{x\to 0} \frac{sen(x)-x}{x^3}$$

No WolframAlpha fica da seguinte forma:

lim (sin x - x)/x^3 as x->0

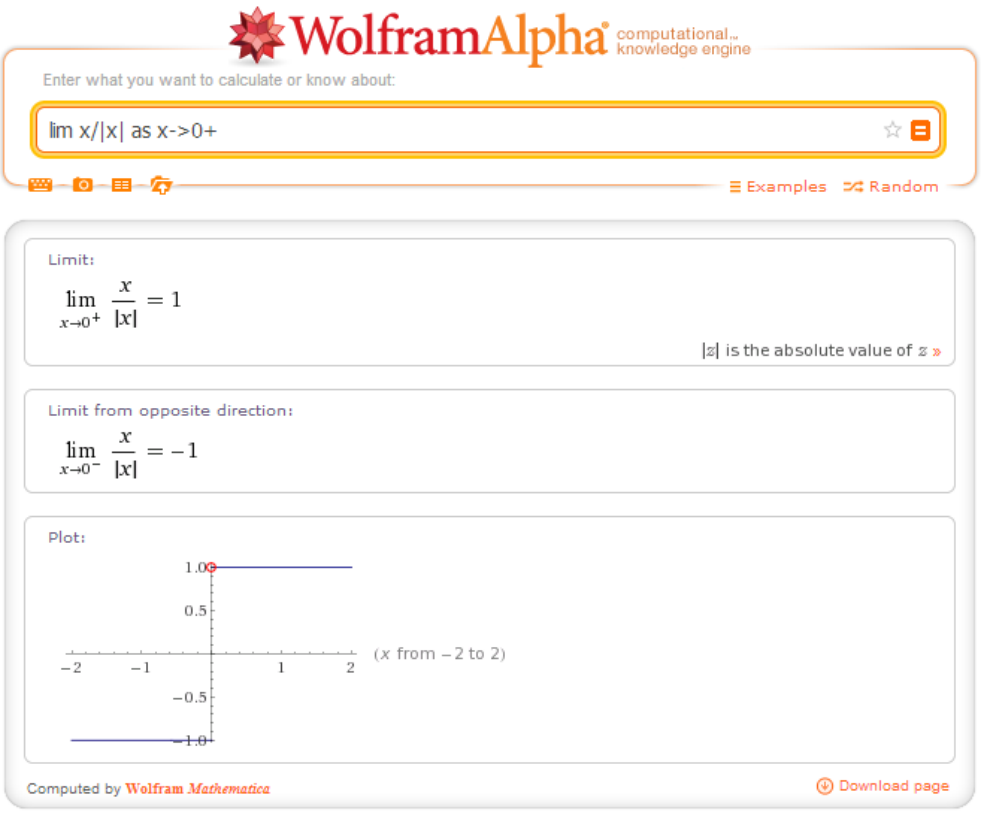


Limites laterais:

$$\lim_{x \to 0+} \frac{x}{|x|}$$

No WolframAlpha:

lim x/|x| as x->0+

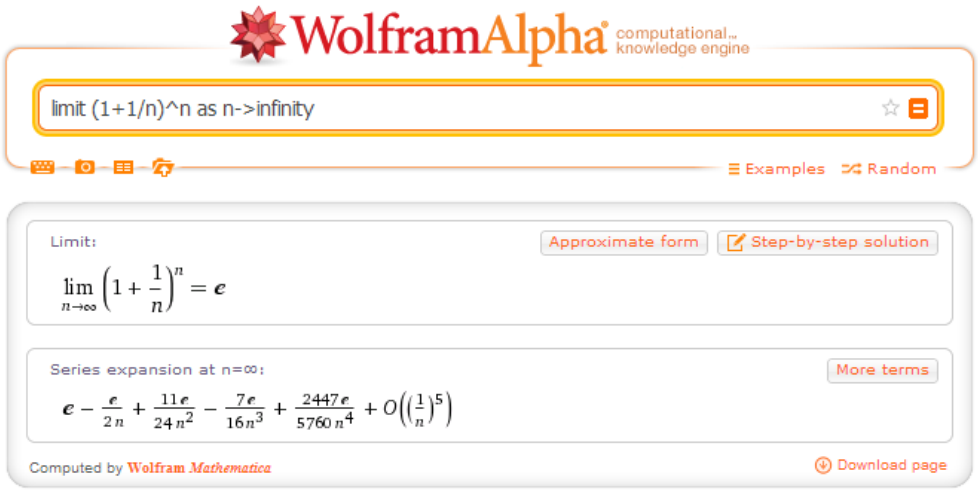


Outra forma:

$$\lim_{x \to \infty} \left(1 + \frac{1}{x}\right)^x$$

No WolframAlpha:

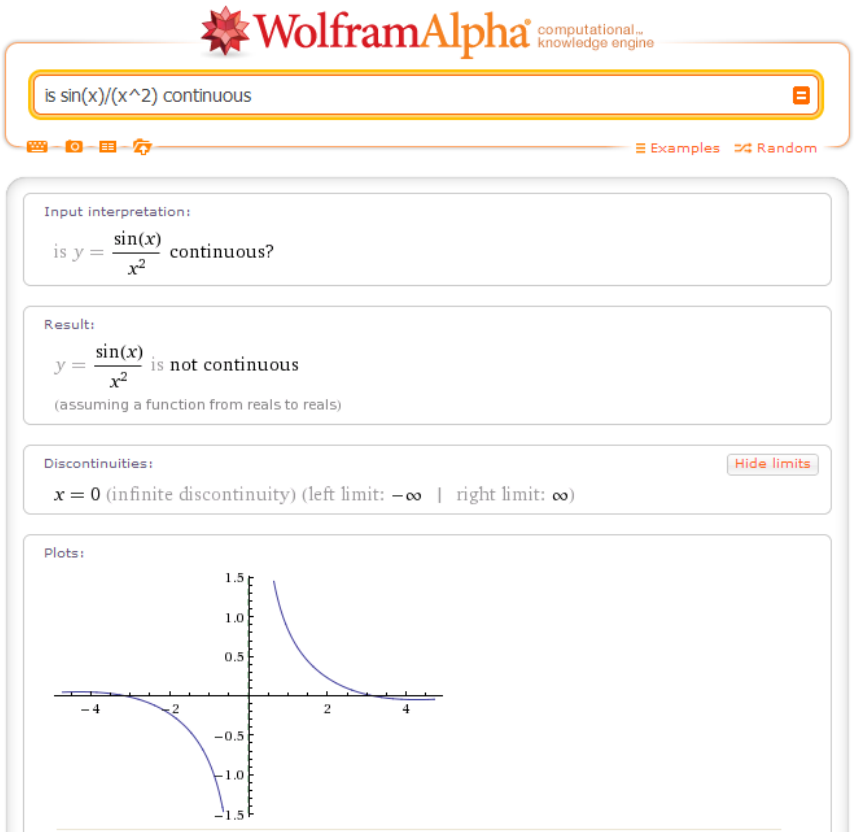
limit (1+1/x)^x as x->infinity



Uma função é contínua? Encontre a resposta no WolframAlpha com:

"is (.....) continuous"

is sin(x)/(x^2) continuous

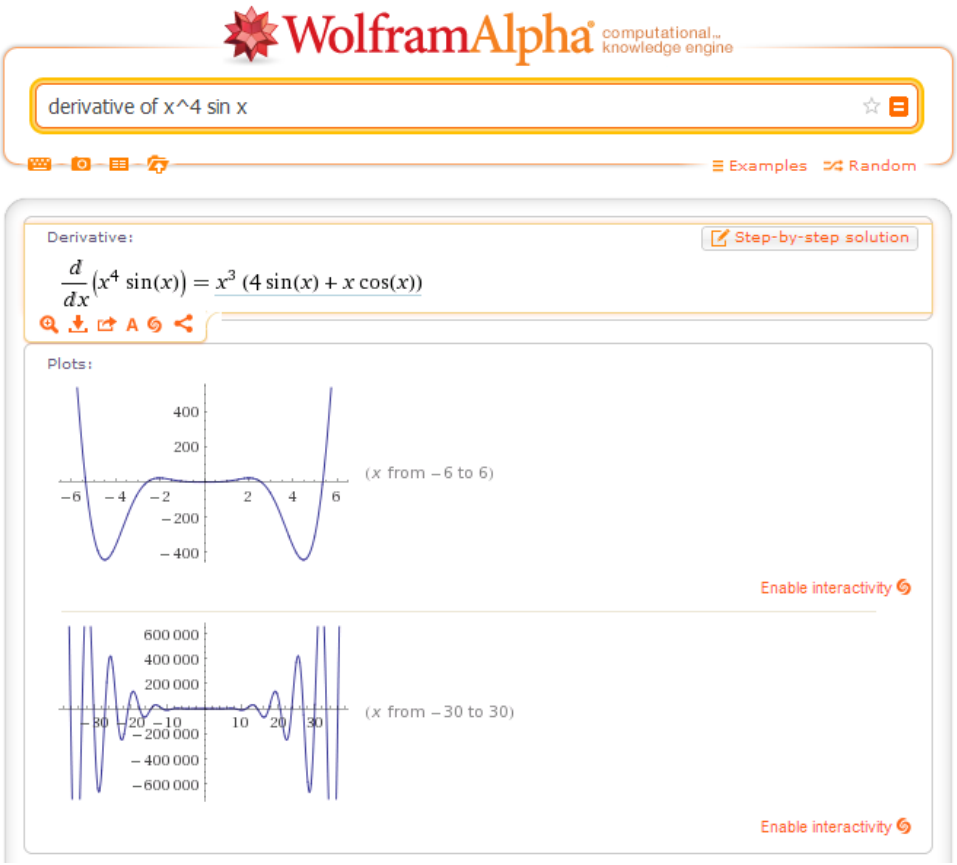


Derivada:

"derivative of"

Exemplos:

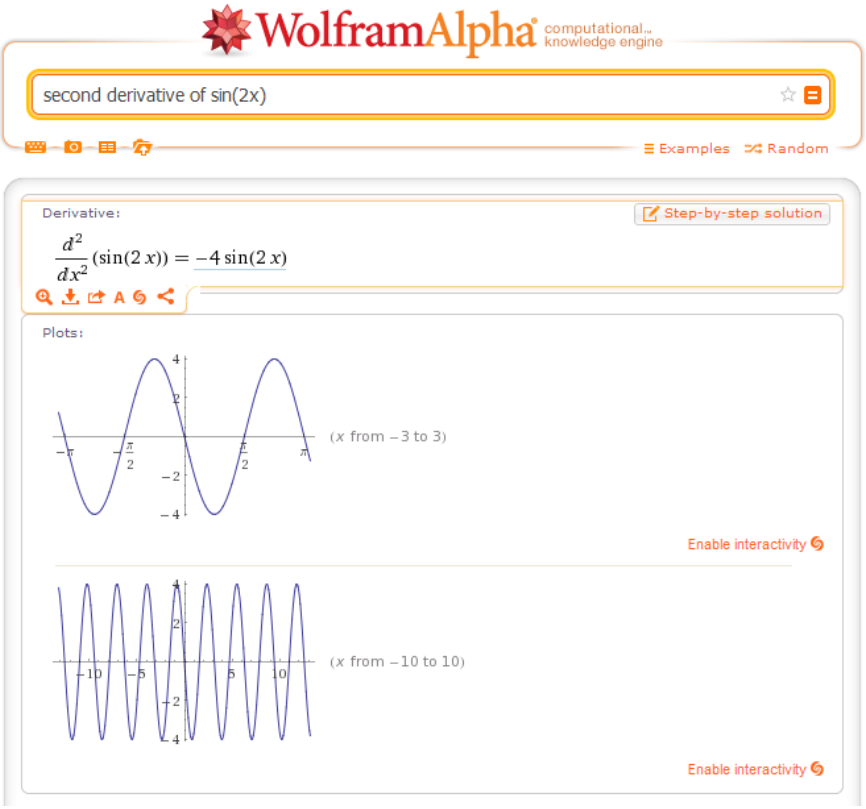
derivative of x^4 sin x



Página completa: http://www.wolframalpha.com/input/?i=derivative+of+x%5E4+sin+x

Derivada segunda:

second derivative of sin(2x)

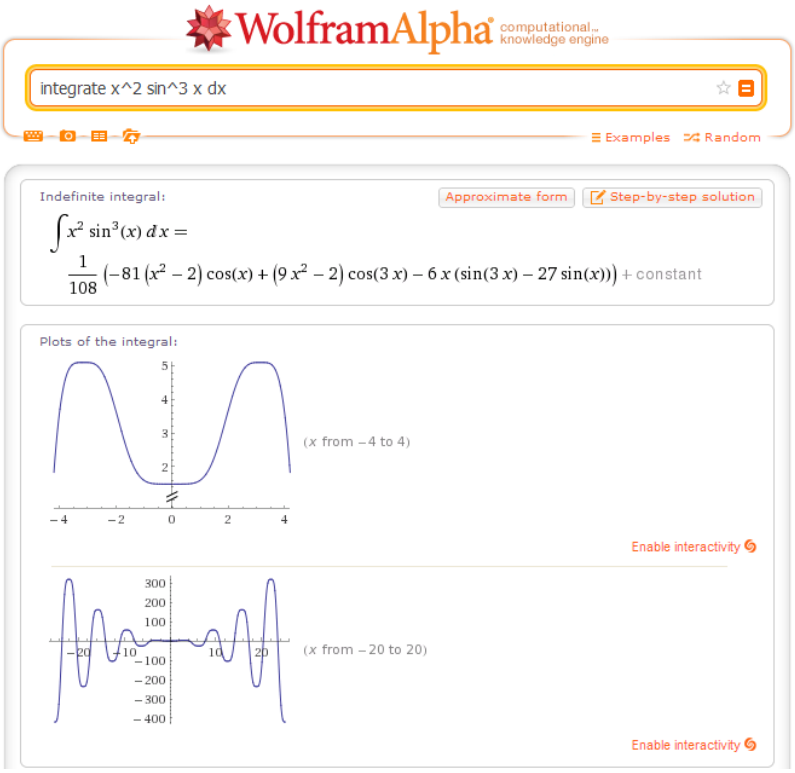


Integral:

“integrate” ou “int”

Integral indefinida:

integrate x^2 sin^3 x dx



Integral definida:

integrate sin x dx from x=0 to pi