

$$\lim_{n\rightarrow\infty}\left(\frac{(n+1)^{(n+1)}-\sqrt[n]{n^{(n+2)}(n+2)^n}}{n^n}\right)$$

$$\sum_{n=1}^{\infty} \sin(\pi((n+1)^{(1/3)}-n^{(1/3)}))\arctg(4^n)$$

$$\lim_{x\rightarrow 0-}\left(\frac{2\sqrt{1-\cos(\sin x)}}{\ln(e^{(2\,x)}+x)}\right)$$

$$f(x)=\max\left\{1,2\,x,x^2\right\}^x$$

$$f(x)=\sin x+|\cos x|$$