$$f(x) = \frac{e^{3x} - 1}{x}$$

x	$\frac{e^{3x}-1}{x}$
$-.1$	2.5918
$-.01$	2.9554
$-.001$	2.9955
$-.0001$	2.9995
$-.00001$	2.999955

x	$\frac{e^{3x}-1}{x}$
$-.1$	2.5918
$-.01$	2.9554
$-.001$	2.9955
$-.0001$	2.9995
$-.00001$	2.999955

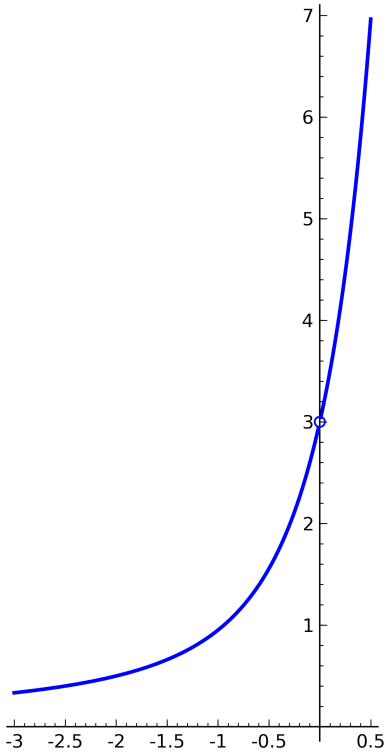
x	$\frac{e^{3x}-1}{x}$
$.1$	3.4986
$.01$	3.0455
$.001$	3.0045
$.0001$	3.00045
$.00001$	3.000045

x	$\frac{e^{3x}-1}{x}$
$-.1$	2.5918
$-.01$	2.9554
$-.001$	2.9955
$-.0001$	2.9995
$-.00001$	2.999955

x	$\frac{e^{3x}-1}{x}$
$.1$	3.4986
$.01$	3.0455
$.001$	3.0045
$.0001$	3.00045
$.00001$	3.000045

Guess: $\lim_{x \to 0} \left(\frac{e^{3x} - 1}{x} \right) = 3$

$$f(x) = \frac{e^{3x} - 1}{x}$$



$$f(x) = \sin\left(\frac{\pi}{x}\right)$$

x	$\sin\left(\frac{\pi}{x}\right)$
$-.1$	0
$-.01$	0
$-.001$	0
$-.0001$	0
$-.00001$	0

x	$\sin\left(\frac{\pi}{x}\right)$
$-.1$	0
$-.01$	0
$-.001$	0
$-.0001$	0
$-.00001$	0

x	$\sin\left(\frac{\pi}{x}\right)$
$.1$	0
$.01$	0
$.001$	0
$.0001$	0
$.00001$	0

x	$\sin\left(\frac{\pi}{x}\right)$
$-.1$	0
$-.01$	0
$-.001$	0
$-.0001$	0
$-.00001$	0

x	$\sin\left(\frac{\pi}{x}\right)$
$.1$	0
$.01$	0
$.001$	0
$.0001$	0
$.00001$	0

Guess: $\lim_{x \to 0} \left(\sin\left(\frac{\pi}{x}\right)\right) = 0$

$$f(x) = \sin\left(\frac{\pi}{x}\right)$$