

Limits

1. Let $f(x) = x^3$. We wish to calculate $\lim_{x \rightarrow 3} f(x)$.

(a) Complete the following tables.

x	$f(x)$
2.9	
2.99	
2.999	
2.9999	

x	$f(x)$
3.1	
3.01	
3.001	
3.0001	

(b) Based on the above tables, what do you conclude about $\lim_{x \rightarrow 3} f(x)$?

2. Let $g(x) = \sin(1/x)$. We wish to calculate $\lim_{x \rightarrow 0} g(x)$.

(a) Complete the following table.

x	$g(x)$
.1	
.01	
.001	
.0001	
.00001	

(b) Based on the above table, what do you conclude about $\lim_{x \rightarrow 0} g(x)$?