

## Limits

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

(a) Complete the following table. Be sure your calculator is in radians.

$x$	$f(x)$
0.1	
0.01	
0.001	
0.0001	
0.00001	

(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. Again, be certain you're using radians.

$x$	$g(x)$
0.1	
0.01	
0.001	
0.0001	
0.00001	

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