Lab #2 – Introduction to Limits Name_____

1. a)

x	$\frac{\sin x}{x}$
0.1	
0.01	
0.001	
0.0001	
-0.1	
-0.01	
-0.001	
-0.0001	

b) _____

2. a)

x	x^2
2.1	
2.01	
2.001	
2.0001	
1.9	
1.99	
1.999	
1.9999	

_____

b)

x	$\sin\left(\frac{1}{x}\right)$
0.1	
0.01	
0.001	
0.0001	
-0.1	
-0.01	
-0.001	
-0.0001	

_____

c)

x	$(1+x)^{\frac{1}{x}}$
0.1	
0.01	
0.001	
0.0001	
-0.1	
-0.01	
-0.001	
-0.0001	

_____

d)

x	$\frac{x^3-1}{\lvert x-1\rvert}$
0.9	
0.99	
0.999	
0.9999	
1.1	
1.01	
1.001	
1.0001	

_____

3. a) _____

b) _____

c) _____

4. a)

x	$\frac{\lvert x^2-x\rvert}{x-1}$
0.1	
0.01	
0.001	
0.0001	
-0.1	
-0.01	
-0.001	
-0.0001	

b) _____

c) _____

5. a) _____

b) _____

c) _____

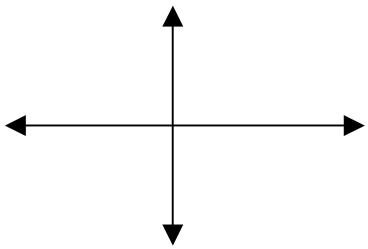
6. a)

x	$\frac{1}{x+1}$
0.1	
0.01	
0.001	
0.0001	
-0.1	
-0.01	
-0.001	
-0.0001	

b) _____

c) _____

7.



8. a) _____

b) _____

c) _____

9. _____ _____

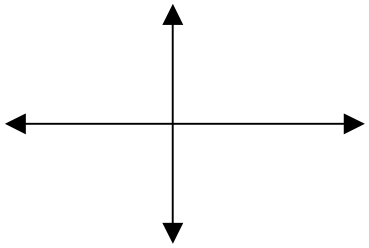
10. a)

x	$\frac{x}{\sqrt{x^2+1}}$
0.1	
0.01	
0.001	
0.0001	
-0.1	
-0.01	
-0.001	
-0.0001	

b) _____

c) _____

d)



11. _____

12.

$\lim_{x\to\infty} F(x)$	$\lim_{x\to-\infty} F(x)$	Horizontal Asymptotes

13. a) _____

b) _____