Calculus 1 – Section 2.1 Name _____

Finding Limits Using Tables

1-4. Complete each table to help you find the limit of each function.

1. $\lim_{x\to 2} 4x-1$

x	1.8	1.9	2	2.1	2.2
$f(x)$					

2. $\lim_{x\to 3} \frac{1}{x^2}$

x	2.8	2.9	3	3.1	3.2
$f(x)$					

3. $\lim_{x\to -1} \frac{x^2-1}{x+1}$

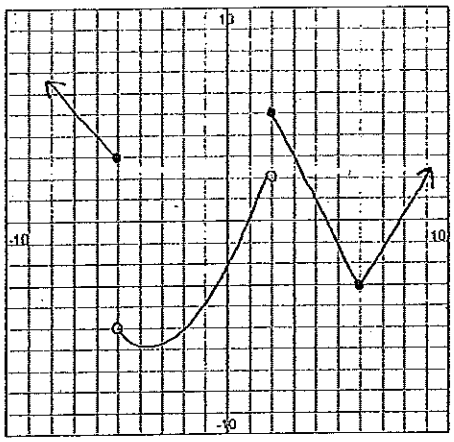
x	-1.2	-1.1	-1	-0.9	-0.8
$f(x)$					

4. $\lim_{x\to 4} \frac{1}{x-4}$

x	3.9	3.95	4	4.05	4.1
$f(x)$					

Finding Limits Using Graphs

5. Use the graph at the right to find the following:



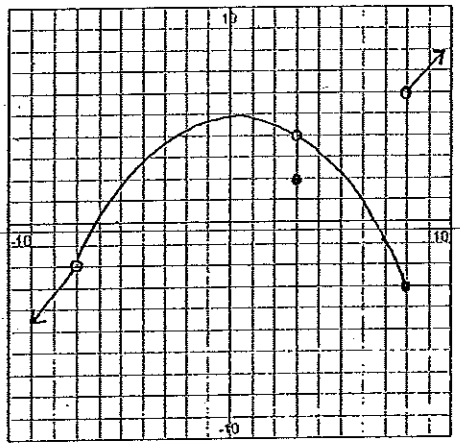
$\lim_{x\to -5-} f(x)$ $\lim_{x\to 2-} f(x)$ $\lim_{x\to 6-} f(x)$

$\lim_{x\to -5+} f(x)$ $\lim_{x\to 2+} f(x)$ $\lim_{x\to 6+} f(x)$

$\lim_{x\to -5} f(x)$ $\lim_{x\to 2} f(x)$ $\lim_{x\to 6} f(x)$

$f(-5)$ $f(2)$ $f(6)$

6. Use the graph at the right to find the following:



$\lim_{x\to -7-} f(x)$ $\lim_{x\to 3-} f(x)$ $\lim_{x\to 8-} f(x)$

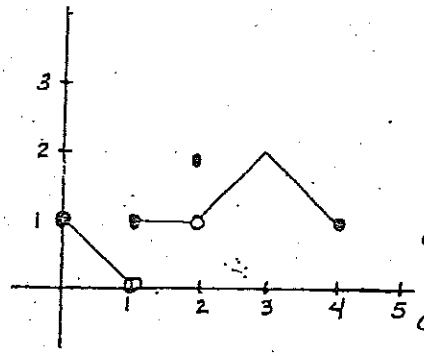
$\lim_{x\to -7+} f(x)$ $\lim_{x\to 3+} f(x)$ $\lim_{x\to 8+} f(x)$

$\lim_{x\to -7} f(x)$ $\lim_{x\to 3} f(x)$ $\lim_{x\to 8} f(x)$

$f(-7)$ $f(3)$ $f(8)$

Calculus Worksheet
Section 2.1 A

1.



a. $\lim_{x \to 1^-} f(x) =$

b. $\lim_{x \to 1^+} f(x) =$

c. $\lim_{x \to 1} f(x) =$

d. $f(1) =$

e. $\lim_{x \to 2^-} f(x) =$

f. $\lim_{x \to 2^+} f(x) =$

g. $\lim_{x \to 2} f(x) =$

h. $f(2) =$

i. $\lim_{x \to 3^-} f(x) =$

j. $\lim_{x \to 3^+} f(x) =$

k. $\lim_{x \to 3} f(x) =$

l. $f(3) =$

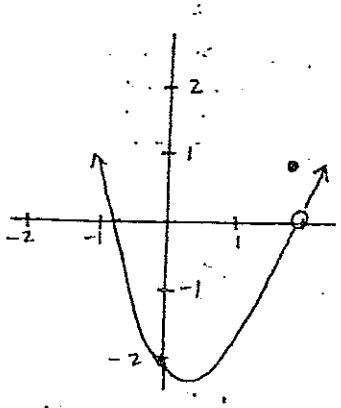
m. $\lim_{x \to 4^-} f(x) =$

n. $\lim_{x \to 4} f(x) =$

o. $\lim_{x \to 0^+} f(x) =$

p. $\lim_{x \to 0} f(x) =$

2.

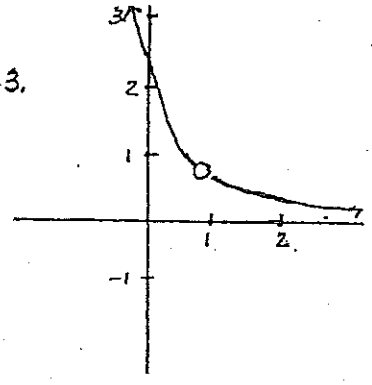


a. $\lim_{x \to 2} f(x) =$

b. $\lim_{x \to 0} f(x) =$

c. $f(2) =$

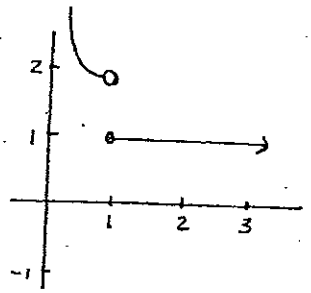
3.



a. $\lim_{x \to 1} f(x) =$

b. $\lim_{x \to 0} f(x) =$

4.



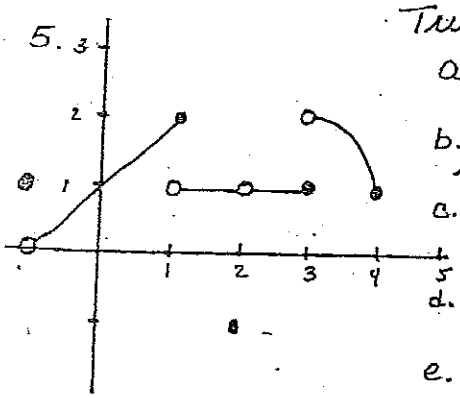
a. $\lim_{x \to 1^-} f(x) =$

b. $\lim_{x \to 1^+} f(x) =$

c. $\lim_{x \to 1} f(x) =$

d. $f(1) =$

5.



True or false?

a. $\lim_{x \to 2} f(x) = -1$

b. $\lim_{x \to -1^+} f(x) = 1$

c. $\lim_{x \to 1^+} f(x) = 1$

d. $\lim_{x \to 2} f(x)$ exists

e. $\lim_{x \to 3} f(x) = 1$

f. $\lim_{x \to 1} f(x)$ does not exist

g. $\lim_{x \to 3^-} f(x) = 1$

h. $\lim_{x \to 0^+} f(x) = \lim_{x \to 0^-} f(x)$

i. $\lim_{x \to 0} f(x)$ exists

j. $\lim_{x \to 2} f(x) = 1$

k. $\lim_{x \to c} f(x)$ exists at every c in the open interval $(-1, 1)$

l. $\lim f(x)$ exists at every c in the open interval $(1, 3)$