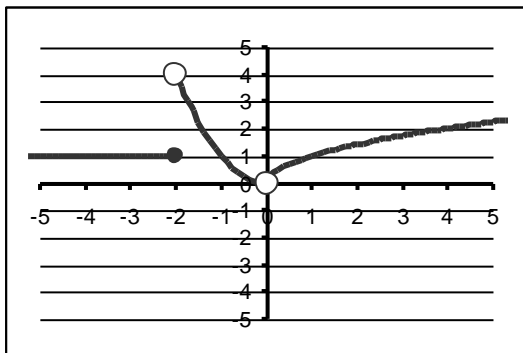**Math 160 Dr. Katiraie – Sections 2.1 and 2.2 - Limits**

Problem (1) - You have been given the graph of $y = f(x)$

b) Complete the following table:

a	$f(a)$	$\lim\limits_{x \to a^-} f(x)$	$\lim\limits_{x \to a^+} f(x)$	$\lim\limits_{x \to a} f(x)$	Is the function continuous at x = a	Explain why or why not
-2						
-1						
0						
1						

b) Answer each of the following:

   3) Domain   2) Range   3) Write the formula(s) that define y

   4) Intervals for which the function

Constant	Increasing	decreasing

   5) F(-3) =   6) F(-2) =   7) F(-1) =   8) F(0) =

   9) F(1) =   10) F(2) =   11) F(3)=

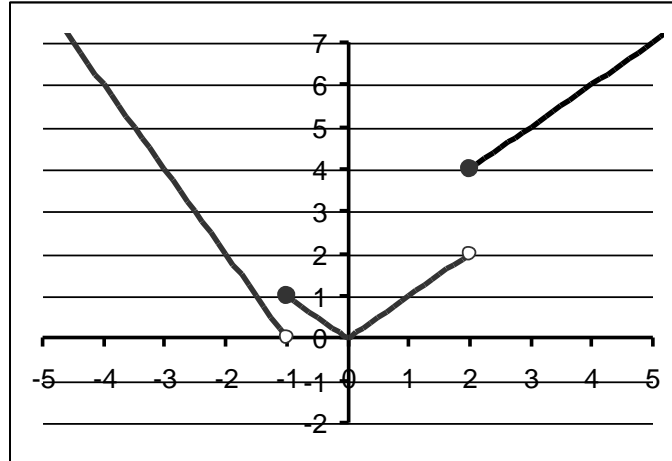   12) All x-intercepts -   13) Y-intercept

   14) All x for which f(x) = 1   15) All x for which f(x) = 0

   16) All x for which f(x) > 0   17) All x for which f(x) ≥ 4

   18) All x for which the function intersects the line y = 3

1

Problem (2) – For the following function:

a) Complete the following table:

a	$f(a)$	$\lim\limits_{x\to a^-} f(x)$	$\lim\limits_{x\to a^+} f(x)$	$\lim\limits_{x\to a} f(x)$	Is the function continuous at x = a	Explain why or why not
-2						
-1						
0						
1						
2						

b) Make up a few questions similar to the ones for problem (1)