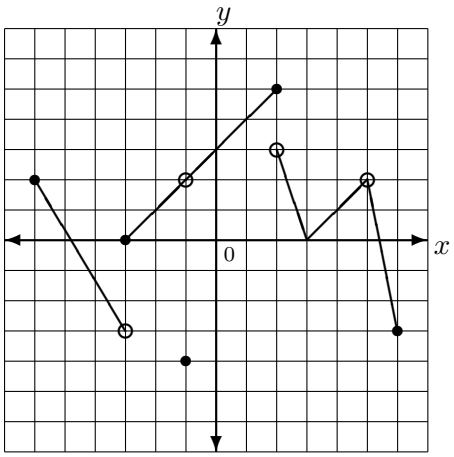
NAME: _____

MATH 12002 **HOMEWORK #1 (10 pts)** **SPRING 2009**

SHOW ALL WORK FOR FULL CREDIT — PLEASE CIRCLE YOUR FINAL ANSWER

DUE: WEDNESDAY, JANUARY 28, 2009 AT THE BEGINNING OF CLASS

1. (1/2 pt each) Given below is the graph of f. Determine the following:



(a) $f(-1) =$

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

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

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

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

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

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

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

2. (2 pts each) Calculate the following limits.

(a) $\lim_{x \to 27} (4x^{-2/3} + 1)$

(b) $\lim_{x \to 6} \dfrac{4x^2 - 21x - 18}{2x^2 - 13x + 6}$

(c) $\lim_{x \to 4} \dfrac{\sqrt{5+x} - 3}{4 - x}$