Calculus 1 (201-NYA-05 C3)
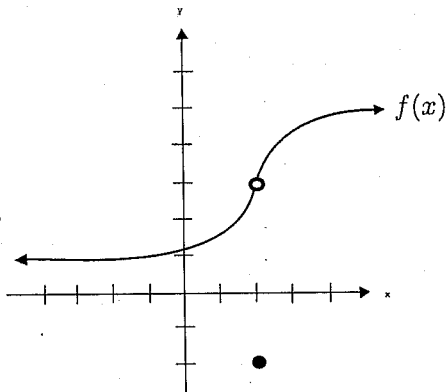## Quiz 1
August 30, 2008

Name:

Student Number:

Remember to clearly show all work and indicate your final answers. Part marks may be given for method but answers alone will not receive full marks. Notes are not allowed. You may use a non-programmable calculator.
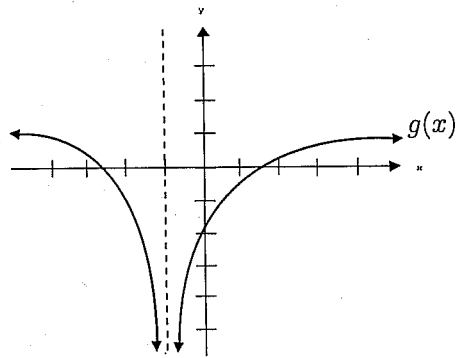
1. *(4 points)* Use the graph to find the limit (if it exists). If the limit does not exist, explain why.

(a)

(b)

$$\lim_{x \to 2} f(x) = 3$$

$$\lim_{x \to -1} g(x) \quad \text{DOES NOT EXIST (DECREASES WITHOUT BOUND, } -\infty)$$

2. *(6 points)* Evaluate the following limits.

$$\text{(a)} \lim_{x \to -2} (3x^2 - 5x + 1)$$

$$= 3(-2)^2 - 5(-2) + 1$$

$$= 3 \cdot 4 + 10 + 1$$

$$= 12 + 10 + 1$$

$$= 23$$

$$\text{(b)} \lim_{x \to 1} \frac{x^2 - 1}{x + 1}$$

$$= \frac{(1)^2 - 1}{(1) + 1} = \frac{0}{2} = 0$$