Dawson College: **Calculus II**: 201-203-DW-S03: Fall 2009

Name: _____
Student ID: _____

Bonus Quiz 1

This quiz is graded out of 10 marks. No books, notes or cell phones are allowed. You must show all your work, the correct answer is worth 1 mark the remaining marks are given for the work. If you need more space for your answer use the back of the page.

Question 1. *(2 marks each)* Find each limit. Use L'Hôpital's Rule where appropriate. Otherwise elementary method.

a.

$$\lim_{x\to 3} \frac{2x^2-3x-9}{x^2-2x-3}$$

b.

$$\lim_{x\to 0} \frac{1-\cos x}{\sin x}$$

c.

$$\lim_{x\to \infty} \frac{\ln(x+1)}{\sqrt{x}}$$

d.

$$\lim_{x\to \infty} \frac{\ln(x-10)}{\ln(4x+1)}$$

e.

$$\lim_{x\to \infty} \frac{e^{4x}}{e^{3x}+x}$$