Dawson College: **Linear Algebra**: 201-105-05-S3: Fall 2012

Name: _____
Student ID: _____

Quiz 4

This quiz is graded out of 10 marks. No books, calculators, 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. §1.4 #51a. *(2 marks)* Show that if A is invertible and $AB = AC$, then $B = C$

Question 2. §1.4 #53a. *(3 marks)* Show that if A, B, and $A+B$ are invertible matrices with the same size then

$$A(A^{-1}+B^{-1})B(A+B)^{-1} = I$$

Question 3. §1.4 #17 *(5 marks)* Use the given information to find A.

$$(I+2A)^{-1} = \begin{bmatrix} -1 & 2 \\ 4 & 5 \end{bmatrix}$$