Dawson College: **Linear Algebra** (SCIENCE): 201-NYC-05-S7: Fall 2015

Name: _____
Student ID: _____

Quiz 2

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. §1.2 #3a *(3 marks)* Suppose that the augmented matrix for a system of linear equations has been reduced by row operations to the given row echelon form. Solve the system.

$$\begin{bmatrix} 1 & -3 & 4 & 7 \\ 0 & 1 & 2 & 2 \\ 0 & 0 & 1 & 5 \end{bmatrix}$$

Question 2. §1.2 #30 *(4 marks)* Solve the following system, where a, b and c are constants.

$$\begin{array}{rcrcrcl} x_1 & + & x_2 & + & x_3 & = & a \\ 2x_1 & & & + & 2x_3 & = & b \\ & & 3x_2 & + & 3x_3 & = & c \end{array}$$

Question 3. §1.2 #31 *(3 marks)* Find two different row echelon forms of

$$\begin{bmatrix} 1 & 3 \\ 2 & 7 \end{bmatrix}$$

This exercise shows that a matrix can have multiple row echelon forms.