Darrigan	Callaga	T image	Alaabaa	(COLEMOE).	201 NWC	05 C5. Eall 201	1
Dawson	College:	Linear	Algebra	(SCIENCE):	201-N Y C	!-05-S5: Fall 201	4

Name:	
Student ID:	

## Quiz 12

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.** (5 marks) §4.3 #2 Prove: For any vectors  $\vec{u}$ ,  $\vec{v}$ , and  $\vec{w}$  in a vector space V, the vectors  $\vec{u} - \vec{v}$ ,  $\vec{v} - \vec{w}$ , and  $\vec{w} - \vec{u}$  form a linearly independent set.

Question 2. (5 marks) §4.4 #15 Find the coordinate vector of  $\vec{p} = 2 - x + x^2$  relative to the basis  $S = \{1 + x, 1 + x^2, x + x^2\}$ .