## QUIZ September 3, 2013

Clicker Instructions: A = True; B = False; C = I don't know; D = No truth value correct = 1pt; don't know = 0pt; wrong = -1pt

1. The following matrix is in reduced echelon form:

| Γ1  | -3 | 2 | 1]          |
|---|----|---|-------------|
| $\begin{bmatrix} 1 \\ 0 \\ 0 \end{bmatrix}$ | 0  | 1 | 1<br>1<br>1 |
| 0   | 0  | 0 | 1           |

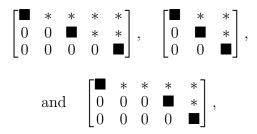
2. The pivot positions of a matrix are uniquely defined and for the matrix

| Γ0 | 0 | 2 ]        |           | Γ· | • | ■7    |
|----|---|------------|-----------|----|---|-------|
| 1  | 2 | $3 \mid$ , | they are: |    | • | ·   . |
| 3  | 6 | 10         | U U       | Į. | • | • ]   |

3. If a consistent system has two free variables, e.g. x and y, then any one choice for both, e.g. (x, y) = (2, 3), determines a unique solution for the whole system.

- 4. Whenever a system has free variables, the solution set contains many solutions.
- 5. Back substitution on a matrix in echelon form is always a slower way to determine the solutions than continuing to find reduced echelon form.
- 6. The augmented matrices

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represent systems with no solution, one solution and infinitely many solutions, respectively.