QUIZ October 28, 2013

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

1. Suppose a vector space V has a basis $\mathbf{v}_1$, $\mathbf{v}_2$. Then any set of three vectors in V must be linearly dependent.
2. Suppose a vector space V has a basis $\mathbf{v}_1$, $\mathbf{v}_2$. Then any set of two vectors in V must be a basis.
3. Suppose a vector space V has a basis $\mathbf{v}_1$, $\mathbf{v}_2$. Then any one vector in V must be linearly independent.
4. Suppose V is a vector space of dimension 7. Suppose that $\mathbf{v}_1, \ldots, \mathbf{v}_7$ are linearly independent. Then they form a basis for V.
5. Let V be a vector space of dimension 23. Let H be a subspace of V. Then H cannot have a basis consisting of more than 22 vectors.
6. Let V be a vector spcae of dimension 3. Let $\mathbf{v}_1, \mathbf{v}_2 \in V$. Then Span $\{\mathbf{v}_1, \mathbf{v}_2\}$ cannot equal V.