

# Math 2210Q: Clicker Questions

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**True or False:** The reduced echelon form of a matrix is unique.

# Row Reduction & Echelon Forms

**True or False:** If every column of an augmented matrix contains a pivot, then the corresponding system is consistent.

# Row Reduction & Echelon Forms

**True or False:** The pivot positions in a matrix depend on whether interchanges are used in the row reduction process.

# Row Reduction & Echelon Forms

**True or False:** A general solution of a system is an explicit description of all solutions of the system.

# Row Reduction & Echelon Forms

**True or False:** Whenever a system has free the variables, the solution set contains many solutions.

# Matrix Equations

**True or False:** If the equation  $A\mathbf{x} = \mathbf{b}$  is consistent, then  $\mathbf{b}$  is in the set spanned by the columns of  $A$ .

# Matrix Equations

**True or False:** Any linear combination of vectors can always be written in the form  $A\mathbf{x}$  for a suitable matrix  $A$  and vector  $\mathbf{x}$ .



# Matrix Equations

**True or False:** If the coefficient matrix  $A$  has a pivot position in every row, then the equation  $A\mathbf{x} = \mathbf{b}$  is inconsistent.

# Matrix Equations

**True or False:** If  $A$  is an  $m \times n$  matrix whose columns do not span  $\mathbb{R}^n$ , then the equation  $A\mathbf{x} = \mathbf{b}$  is consistent for every  $\mathbf{b}$  in  $\mathbb{R}^n$ .