1. If a system of $n$ linear equations in $n$ unknowns is consistent, then the rank of the matrix of coefficients is $n$.
   
   (a) True  
   (b) False

2. If the determinant of the matrix of coefficients of a system of $n$ linear equations in $n$ unknowns is singular, then the system has infinitely many solutions.
   
   (a) True  
   (b) False

3. If the reduced row echelon form of the matrix of coefficients of a system of $n$ linear equations in $n$ unknowns is the identity matrix, then the determinant of the matrix of coefficients is non-zero.
   
   (a) True  
   (b) False

4. If a system of $n$ linear equations in $n$ unknowns is dependent, then the rank of the matrix of coefficients is less than $n$.
   
   (a) True  
   (b) False

5. If the matrix of coefficients of a system of $n$ linear equations in $n$ unknowns does not have an inverse, then the system has no solutions.
   
   (a) True  
   (b) False

6. If the rank of the matrix of coefficients of a homogeneous system of $n$ linear equations in $n$ unknowns is $n - 1$, then the system has infinitely many solutions.
   
   (a) True  
   (b) False
7. If the rank of the augmented matrix of a system of $n$ linear equations in $n$ unknowns is greater than the rank of the matrix of coefficients, then the matrix of coefficients is singular.

   (a) True
   (b) False

8. If the matrix of coefficients of a homogeneous system of $n$ linear equations in $n$ unknowns has an inverse, then the system does not have infinitely many solutions.

   (a) True
   (b) False

9. If a system of $n$ linear equations in $n$ unknowns is inconsistent, then the reduced row echelon form of the matrix of coefficients is not $I_n$.

   (a) True
   (b) False

10. If the matrix of coefficients of a homogeneous system of $n$ linear equations in $n$ unknowns is nonsingular, then the trivial solution is the only solution of the system.

   (a) True
   (b) False