

Math 3013 Linear Algebra, Spring 2011
Quiz 2

Feb. 22, 2011

1. Answer 'True' or 'False'. (5 points)

----- If A and B are invertible matrices, then $A + B$ is also invertible.

----- The dimension of $\text{span}\{\mathbf{v}_1, \mathbf{v}_2, \dots, \mathbf{v}_k\}$ is less than or equal to k .

----- Let A be a 2×5 matrix, then $\text{rank}(A) \leq 2$.

----- Let A be a 5×6 matrix, then $\text{rank}(A) + \text{nullity}(A) = 5$.

----- Let A be a $n \times n$ matrix and $\text{rank}(A) = n$, then $A\mathbf{x} = \mathbf{0}$ has nontrivial solutions.

2. Find the inverse of (5 points)

$$A = \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$$