MATH347.01M.24 Quiz 1

Name:

Answer true-false. Include a short explanation or calculation to support your T/F answer.

1. For any matrix $\boldsymbol{A}$, $\boldsymbol{A}=\boldsymbol{A}^{\mathrm{T}}$.

2. A vector space may have more than one zero vector.

3. In some vector space a,b are scalars, **u** is a vector.

   a **u** = b **u** implies a = b.

4. In some vector space a is a scalar, **u**,**v** are vectors.

   a **u** = a **v** implies **u**=**v**.

5. Choose n vectors in some vector space. The zero vector can be obtained by linear combination of the n chosen vectors.

6. For vectors, x,y,z, let (x,y) be an inner product. If (x,y)=(x,z) then y=z.

7. If the inner product (x,y)= 0 for all vectors x,y, then y= 0.

8. If S spans the vector space V, then every vector in V can be written as a linear combination of vectors in S in only one way.