

Since V and V' are isomorphic (they are both n -dimensional), their counts of m -dimensional subspaces are equal. The mapping $\mathfrak{m} \rightarrow \mathfrak{m}^0$ together with theorems 1 and 2 then fashions a bijection of the m -dimensional subspaces of \mathfrak{V} with the $n - m$ -dimensional subspaces of \mathfrak{V}' . **Injectivity:** suppose $\mathfrak{m}_1^0 = \mathfrak{m}_2^0$. Then by theorem 2, we get $\mathfrak{m}_1 = \mathfrak{m}_2$. **Surjectivity:** let \mathfrak{m}' be a subspace of \mathfrak{V}' . Then $((\mathfrak{m}')^0)^0 = \mathfrak{m}'$, again by theorem 2.