

Additional Problems Assignment 22

The following problems have you prove things that we have been sorting of using without proof but it is a good test of your knowledge to try to prove them. They should be easy to prove if you understand your definitions and basic theorems. Try to prove them on your own and see if you can prove them without looking at the book. If not look at the definitions again and try again.

1. If V and W are subspaces of \mathbb{R}^n and $V \subseteq W$ then if $\vec{v}_1, \vec{v}_2, \dots, \vec{v}_m$ are a basis for V then they are linearly independent in W .
2. If V and W are subspaces of \mathbb{R}^n and $V \subseteq W$ then $\dim(V) \leq \dim(W)$.