

Subspaces

Linear Algebra
College of the Atlantic

1. Is a line through the origin a subspace of \mathbb{R}^2 ?
2. Is a line through the origin a subspace of \mathbb{R}^3 ?
3. Is a line not containing the origin a subspace of \mathbb{R}^2 ?
4. Is a plane through the origin a subspace of \mathbb{R}^3 ?
5. Is the first quadrant a subspace of \mathbb{R}^2 ?
6. Consider a set of vectors in \mathbb{R}^2 where the components are integers? Is this set a subspace of \mathbb{R}^2 ?
7. Is \mathbb{R}^n a subspace of \mathbb{R}^n ?