



[Course](#) > [Unit 2: ...](#) > [3 Colu...](#) > 1. Colu...

# 1. Column space, solving inhomogeneous equations, determinants and inverses

## Objectives

- Apply the **rank nullity theorem** to find the dimension of the span of the columns of a matrix and the dimension of its nullspace.
- Find a basis for the span of a set of vectors.
- Relate the solutions to **inhomogeneous linear systems**  $\mathbf{Ax} = \mathbf{b}$  to solutions to the homogeneous system  $\mathbf{Ax} = \mathbf{0}$  plus one particular solution.
- Compute **matrix inverses** using augmented matrices and row reduction techniques.
- Use the **determinant** to determine if a square matrix is invertible.

## 1. Column space, solving inhomogeneous equations, determinants and inverses

Hide Discussion

**Topic:** Unit 2: Linear Algebra, Part 2 / 1. Column space, solving inhomogeneous equations, determinants and inverses

Add a Post

Show all posts ▼

by recent activity ▼

There are no posts in this topic yet.



Learn About Verified Certificates

© All Rights Reserved