

# Week 2 Homework - System of Linear Equations, Determinant and Matrix Inverse

[Start Assignment](#)

- Due Sunday by 11:59pm
- Points 100
- Submitting a file upload
- Available until Feb 12 at 11:59pm

The goal of this homework is to learn how to solve systems of linear equations and to be able to compute the determinant and the inverse of an invertible matrix.

## After this assignment you will be able to:

- Use `NumPy` package to set up the arrays corresponding to the system of linear equations.
- Evaluate the determinant of a matrix and find the solution of the system with `NumPy` linear algebra package.
- Perform row reduction to bring a matrix into row echelon form.
- Find the solution for the system of linear equations using elimination.
- Compute the inverse of a matrix with `Numpy` Linear Algebra package and use elimination.

Download the notebook with the instructions and the starting template from [here](#)

<https://sit.instructure.com/courses/78114/files/14823564?wrap=1> ↓

[https://sit.instructure.com/courses/78114/files/14823564/download?download\\_frd=1](https://sit.instructure.com/courses/78114/files/14823564/download?download_frd=1)

[\(\\$CANVAS\\_COURSE\\_REFERENCE\\$/file\\_ref/gc74e2cff69738b6ba15e88904dd22d88/download\)](#) and submit a .ipynb file with your solutions.

## Homework 2 - Grading Scheme

Criteria	Ratings	Pts
Problem 1.1		30 pts
Problem 1.2		10 pts
Problem 2.1		10 pts
Problem 2.2		10 pts
Problem 3.1		30 pts
Problem 3.2		10 pts
		Total Points: 100