

MATH 3130-300
Introduction to Linear Algebra
Week 1

Daily Homework

Date	Section	Assignment
6/5	1.1	1, 2, 3, 6, 9, 10, 12, 13, 16, 17, 19, 22, 24, 26, 27
6/6	1.2	2, 3, 10, 11, 18, 19, 22, 24, 29
6/7	1.3	1, 2, 5, 6, 8, 9, 12, 19, 21, 24, 29, 33
6/8	1.4	1, 2, 3, 6, 7, 10, 12, 13, 14, 19, 20, 24
6/9	1.5	2, 3, 5, 8, 11, 13, 14, 19, 20, 24

Weekly Homework (Due 6/9)

1. Solve the following system of linear equations:

$$\begin{aligned}x_1 + 2x_2 + x_3 + 6x_4 &= 7 \\2x_1 + 4x_2 + 3x_3 - 3x_4 &= 14 \\-x_1 - x_2 + x_3 - 6x_4 &= -8 \\3x_1 - 3x_2 - 15x_3 + 9x_4 &= 12\end{aligned}$$

2. Prove that for all $\mathbf{u}, \mathbf{v} \in \mathbb{R}^n$,

- (a) $\mathbf{u} + \mathbf{v} = \mathbf{v} + \mathbf{u}$,
(b) $0\mathbf{u} = \mathbf{0}$.