Homework 3

MATH 231

Due Wednesday, September 20, 2023

Instructions. *Your work will be collected in class on the due date. We will also have a quiz in class on the due date based on the content from the assignment. See the back of the textbook for solutions and hints for odd-numbered problems.*

Exercise 1. Complete the following exercises from Section 1.3 in the course textbook:

15, 17, 18

Exercise 2. Complete the following exercises from Section 1.4 in the course textbook:

1, 3, 7, 9, 11, 13, 14, 15, 17, 19, 21, 25, 27, 28, 30, 32, 36, 41, 43

Exercise 3. Complete the following exercises from Section 1.5 in the course textbook:

7, 9, 11, 13, 15, 21, 27–36, 38–45

Exercise 4. Let $\mathbf{v} \in \mathbb{R}^n$. Show that if $\mathbf{v} \cdot \mathbf{v} = 0$, then $\mathbf{v} = 0$.