Due: upload to Gradescope by Friday 29 November 2019 at 3pm.
Reading: Chapter 5.3 and 6.1–6.3 from the textbook.

Grading: 1 point per exercise for completeness. The exercises marked with a ($\star$) will also be graded for correctness, and will be assigned an additional 3 points each.

Submit your written solutions to the following questions from the textbook:

Chapter 5.3:
Ex. 1($\star$)
Ex. 5
Ex. 7
Ex. 15
Ex. 17
Ex. 23
Ex. 29($\star$)
Ex. 30
Ex. 32

Chapter 6.1
Use Sarrus's rule to find the determinant of the matrices in the following exercises:
Ex. 6($\star$)
Ex. 8

Chapter 6.2
Ex. 8($\star$)
Ex. 16
Ex. 59

Chapter 6.3
Ex. 2
Ex. 6($\star$)
Ex. 19
Ex. 20

Submit your written solution to the following exercise:

Q1: Let $T : \mathbb{R}^2 \to \mathbb{R}^2$ be the reflection about a line L in $\mathbb{R}^2$. Show that T is an orthogonal transformation.

Optional exercise about Vandermonde determinants: Chapter 6.2 Ex. 31 (This exercise is optional, so you don't need to hand in your solutions.)