310b: Homework Sets 2020

**Homework rules:** Arguments should be precise, concise and correct. We expect rigorous and complete proofs. Answers should be clean and legible. Please use a separate sheet of paper for each problem (easier for you to work with, and easier to grade), and staple together all the sheets you hand in. Solve **four** of the **five** problems assigned each week (only **first four** problems you submit will be graded). Problems can be solved in a group effort, but students should independently write their own solutions!

Homework problems marked by a * are likely to be more difficult.

**Homework 1:** due January 17th.
Read everything in Sections 4.1 and 4.2 not covered in lectures by Jan. 10th.

**Solve Exercises** 4.1.3, 4.1.8*, 4.2.16, 4.2.22* and 4.2.23.
Solution will also be provided for Exercises 4.2.12 and 4.2.21

**Homework 2:** due January 24th.
Read everything in Chapter 4 not covered in lectures by Jan. 15th.

**Solve Exercises** 4.3.11, 4.4.4, 4.4.5, 4.4.6 and 5.1.8*.
Solution will also be provided for Exercises 4.2.27, 4.2.29 and 4.2.32

**Homework 3:** due January 31st.
Read everything in Sections 5.1 and 5.4 not covered in lectures by Jan. 24th.

**Solve Exercises** 5.1.13, 5.1.14*, 5.1.15, 5.1.26* and 5.1.35.
Solution will also be provided for Exercises 5.1.12 and 5.1.37*

**Homework 4:** due February 7th.
Read everything in Sections 5.2 and 5.3 not covered in lectures by Jan. 31st.

**Solve Exercises** 5.3.3, 5.3.9*, 5.3.17, 5.4.10 and 5.4.12*.
Solution will also be provided for Exercises 5.3.10, 5.4.6 and 5.4.14

**Homework 5:** due February 14th.
Read everything in Sections 5.5.1 and 5.5.2 not covered in lectures by Feb. 7th.

**Solve Exercises** 5.2.5*, 5.2.11, 5.2.14, 5.2.19* and 5.3.32.
Solution will also be provided for Exercises 5.2.10, 5.2.15 and 5.3.20

**Homework 6:** due February 21st.
Read everything in Sections 5.5.3 and 6.1 that was not covered in lectures.

**Solve Exercises** 5.3.39, 5.5.9*, 5.5.19, 5.5.30 and 5.5.32.
Solution will also be provided for Exercises 5.5.8*, 5.5.15 and 5.5.29

**Homework 7:** due February 28th.
Read from Section 6.2 up to the start of Section 6.2.1 everything that was not covered in lectures.

**Solve Exercises** 6.1.14, 6.1.15, 6.1.18*, 6.2.2 and 6.2.5*.

**Homework 8:** due March 6th.
Read everything in Sections 7.1 and 7.2 that was not covered in lectures.

**Solve Exercises** 7.1.13, 7.1.14, 7.1.15, 7.1.16 and 7.2.10