Math 11 Homework Assignments, Fall 2017

Math 11 homework assignments will be due approximately weekly. Please work carefully, and show the steps in your calculations, not just the final answer. A selection of problems will be chosen each week to be graded, both for completeness and correctness.

Answers to a few of the assigned problems will be posted in TritonEd, so that you can get some immediate feedback. However, answers will not be provided for all problems. Even-numbered problems are typically similar to the preceding odd-numbered problem, so you could consider working the previous odd-numbered problem first and checking your answer to make sure you are on the right track.

Homework solutions will be posted in TritonEd after the due date. They are for your personal use only. Distributing them to future Math 11 students, or anyone else not currently enrolled in Math 11, or posting them online in any form, is both a copyright violation and an academic integrity violation.

Remember that you must follow the Academic Integrity Policy when completing your homework.

**Homework 1 (due Friday, October 6)**

Reading: Chapter 1, Chapter 2 (only section 2.1 and the section on Simpson's Paradox on p. 31), Chapter 3 (but skip Stem-and-Leaf Displays and Dotplots), Chapter 4 (only sections 4.1-4.3), Chapter 5 (only sections 5.1-5.2), and Chapter 6 (but skip Kendall's Tau, Spearman's Rho, and Straightening Scatterplots).

- Chapter 3, Problems 6, 8, 20, 24, 26, 28ab, 32, 34, 38, 56
- Chapter 4, Problems 16, 30abc, 32
- Chapter 5, Problems 4, 14, 16, 20 (Make sure you are doing the Chapter 5 exercises, and not the Part I Review exercises)
- Chapter 6, Problems 6, 8, 20, 22, 26, 28, 32, 34, 36, 38

**Homework 2 (due Friday, October 13)**

Reading: Chapters 7, 8, and 9.

- Chapter 7, Problems 8, 18, 20, 22, 28, 36, 40, 44, 46, 54, 60, 76
- Chapter 8, Problems 6, 20, 26
- Chapter 9, Problems 2, 10cde, 12
- Part II Review, Problems 2, 10, 26

**Homework 3 (due Friday, October 20)**

Reading: Chapters 13 and 14.

- Chapter 13, Problems 16, 24, 26, 28, 40b, 42ab, 46, 48, 52
- Chapter 14, Problems 16, 18, 22, 28, 30bd, 32abc, 34, 36, 48, 50, 56ab, 60
Homework 4 (due Wednesday, October 25)

Reading: Chapter 15 (but skip the section on correlation and covariance) and Sections 16.1-16.3.

- Chapter 15, Problems 12b, 16, 20, 24, 26, 36, 40, 42, 44, 52 (In problem 36e, X_1, X_2, and X_3 are independent random variables with the same mean and standard deviation as X.)
- Chapter 16, Problems 2, 24, 26, 30, 36, 38abc
- Part IV Review, Problems 16bc, 28ab

Homework 5 (due Friday, November 3)

Reading: Sections 16.6-16.7 and this handout on continuous distributions (also available in TritonEd).

- Chapter 16, Problems 8, 48, 50, 60, 62
- Part IV Review, Problem 38
- Problems 1-9 on this handout on continuous distributions (also available in TritonEd).

Homework 6 (due Monday, November 13)

Reading: Sections 5.3-5.5, Chapter 11, Section 16.4, and Chapter 17.

- Chapter 5, Problems 10, 38, 44, 48
- Chapter 11, Problems 6, 14, 24, 26, 28
- Chapter 17, Problems 28, 34, 36, 40, 50, 52, 56, 58, 62ab

Homework 7 (due Friday, November 17)

Reading: Chapters 18, 19, and 21 (but skip Section 21.4 and the last example in section 21.3).

- Chapter 18, Problems 14, 16, 22, 24a, 28, 32abc, 36a, 38ab
- Chapter 19, Problems 12, 14, 22, 24abcd, 42
- Chapter 21, Problems 4, 8, 16, 18, 20, 34, 36a, 38, 50abc

Note: for hypothesis testing problems, you must show how you calculated your test statistic. You do not need to show work for the step of going from the test statistic to the p-value, as this step comes from tables or a calculator. You should always write a concluding sentence in which you explain your conclusion in the context of the problem.

Homework 8 (due Monday, November 27)

Reading: Chapter 20 and Section 21.4.

- Chapter 20, Problems 8, 16, 18, 20, 22, 24, 30, 38abdef, 42, 48
- Chapter 21, Problems 44, 46
Note: for hypothesis testing problems, you must show how you calculated your test statistic. You do not need to show work for the step of going from the test statistic to the p-value, as this step comes from tables or a calculator. If you are using tables rather than a calculator, it is acceptable just to report an interval containing the p-value. You should always write a concluding sentence in which you explain your conclusion in the context of the problem.

**Homework 9 (due Friday, December 1)**

Reading: Sections 22.5 and 22.6 (but skip Tukey's Quick Test and A Rank Sum Test), and Chapter 23

- Chapter 22, Problems 54, 58, 60, 62, 68, 70, 72 (Note: problem 58 should refer to "Exercise 51, Chapter 4" not "Exercise 50, Chapter 4".)
- Chapter 23, Problems 2, 10, 12, 14, 16, 20, 22, 28

Note: as always, for hypothesis testing problems, you must show how you calculated your test statistic, and write a concluding sentence in which you explain your conclusion in the context of the problem.

**Homework 10 (due Friday, December 8)**

Reading: Sections 25.1-25.6 and Chapter 24

- Chapter 25, Problems 26, 30, 36, 38, 42, 46bd, 48, 60abcde
- Chapter 24, Problems 12, 14, 16, 18, 38, 40bcd, 44