HW 4. DUE WEDNESDAY JULY 18 IN CLASS

MATH 170A SUMMER 2018

No late HW is accepted. I must have your HW before I leave the classroom on Wednesday.

The material for problem 5 will be introduced in Monday's lecture. This material is covered in section 2.5 of the book.

(1) Supplementary problems Chapter 2 problem 12.
(2) Supplementary problems Chapter 2 problem 13. (This question is similar to problem 27 in the end of chapter problems in Chapter 2.)
(3) Consider the p.m.f. $p_{X,Y}(x, y)$ given in Figure 2.15 on page 111 of the textbook. Find the marginal p.m.f.s of X and Y. (This question is very similar to example 2.9 on page 93.)
(4) You run 3 miles every day. On a given day, you record the time it takes you (in minutes), and this takes values 25, ..., 31, with each one being equally likely. The time it takes you on any day is independent of the time on other days. You used to record your time every day. Now, you just remember how long it took you every day, and then at the end of the week, record your best time from that week. By how much have you improved your expected recorded time? (This is very similar to problem 26 in the end of chapter problems in Chapter 2.)
(5) Supplementary problems Chapter 2 problem 18. In part (d), find the conditional mean (not the conditional variance).

Supplementary problems: http://www.athenasc.com/CH1-prob-supp.pdf,
http://www.athenasc.com/CH2-prob-supp.pdf