

In-class, Week 8, day 1

Section 6.2, Problem 14:

- a) Show that if seven integers are selected from the first 10 positive integers, there must be at least two pairs of these integers with the sum 11.
- b) Is the conclusion in part a true if six integers are selected, rather than 7?

Section 6.3, Problem 24: How many ways are there for 10 women and six men to stand in a line so that no two men stand next to each other? [Hint: First position the women, then consider the possible positions for the men.]

Section 6.3, Problem 30: Seven women and nine men are in the mathematics faculty.

- a) How many ways are there to select a committee of five members of the department if at least one woman must be on the committee?
- b) How many ways are there to select a committee of five members of the department if at least one woman and at least one man must be on the committee?