Math 55 Section 101 Quiz 6

Note   You can leave your final answers in unsimplified form (no need to break out a calculator).

Problem 1   (6.4 Q 27) A club has 25 members.

1.A   (2 pt) The club needs an executive committee to organize an event. How many possible 4 member committees can be made from the groups 25 members?

1.B   (2 pt) How may ways are there to choose a president, vice president, secretary and treasurer of the club, where no person can hold more than one office?

Problem 2   How many ways are there for m men and w women to stand in line so that no two men are next to each other in the following situations? Assume that the men (and women) are indistinguishable (m-tuplets and w-tuplets?). Argue the correctness of your answer.

2.A   (3 pt) If $w < m$? Hint: To formalize your answer, use the pigeon hole principle.

2.B   (3 pt) If $w \geq m$? Do this on the back please.