Name: _____
MATH 108
Fall 2022
HW 13: Due 11/07

Problem 1. (10pt) Suppose that at a small college there is a 20% chance that a student is a business major. You performing a survey of student satisfaction of the college's new vision and you take a sample of 13 students.

  (a) What is the probability that exactly 4 students in the survey are business majors?

  (b) What is the probability that three or less of the students are business majors?

  (c) What is the probability that less than three of the students are business majors?

  (d) What is the probability that at least one of the students is a business major?

Problem 2. (10pt) You and your friends are all 'serial late arrivals', i.e. you always tend to be late for things. There is an 80% chance that you and your friends are late for events. Suppose you and 6 of your friends are invited to a party.

  (a) What is the probability that exactly four of you are late?

  (b) What is the probability that all of you are late?

  (c) What is the probability that more than three of you are on time?

  (d) What is the probability that none of you are late?