

**MTH245 Homework 10 Part A**

**These two will need to be done as an Excel file, then there are 6 more problems in Moodle**

1. A 60 question, multiple-choice exam is given in class. You failed to study. Each question has five choices, but you are confident that you can always eliminate one choice as being clearly wrong, and then will guess among the remaining choices. Use the **binomial** distribution to find the probability of correctly answering:

- a. exactly 15 questions
- b. 20 or more questions?
- c. between 10 and 15 questions, including 10 and 15?
- d. more than 22 questions?

2. An airline sells 140 tickets for a flight. Suppose the probability that any given ticket holder actually shows up for the flight is 95%. Find the probability that

- a. No one shows up for the flight.
- b. Everyone shows up for the flight.
- c. Exactly 130 passengers show up.
- d. At most 130 passengers show up.
- e. At least 130 passengers show up.
- f. Less than 130 passengers show up.
- g. The number of passengers showing up is between 130 and 140, including 130 and 140.