1.1 [20 points] A State’s License Plate contains either 3 letter A-Z followed by 3 digits 0-9, or 3 digits 0-9 followed by 3 letter A-Z. How many possible plate numbers are there?

1.2 [25 point] 5 boys and 5 girls sit in a row. How many ways can this be done if all the girls sit together?
1.3 [25 point] How many distinct words of length 3 can be made from the letters in the word BOOHOO assuming that no letter can be used more often than it appears in the word “BOOHOO”?

1.4 [30 point] A man is dealt 5 spade cards from an ordinary deck of 52 cards. If he is given 5 more, what is the probability that at most 1 of them is spade?