Problems under Baye's theorem

1. There are three bags. First bag contains 1 white, 2 red and 3 green balls. Second bag contains 2 white, 3 red and 1 green balls. Third bag contains 3 white, 1 red and 2 green balls. A bag is chosen at random and 2 balls are drawn from it. These are found to be 1 white and 1 red. Find the probability that the balls so drawn came from the second bag.
   Ans 6/11

2. Three typists A, B, C typed 50%, 30% and 20% pages of a book. The percentage of wrongly typed pages by them is 3, 4, and 5 respectively. If a page is selected from the book at random, what is the probability that it is wrongly typed and is typed by A?
   Ans 0.015 & 0.037

3. In a certain college, 4% of the boys and 1% of girls are taller than 1.8m. Further, 60% of the students are girls. If a student is selected at random and is found to be taller than 1.8m, what is the probability that the student is a girl?
   Ans = 0.2727

4. The chance that a doctor will diagnose a disease correctly is 60%. The chance that a patient will die after correct diagnosis is 40% and the chance of death by wrong diagnosis is 70%. If a patient dies, what is the chance that his disease was correctly diagnosed?
   Ans = 0.4615
