Quiz 1

Q1. 100 patients in a certain hospital were randomly selected and asked if they smoke (S) or not (S^c) and whether they have chronic bronchitis (B) or not (B^c). Based on this information

	(S)	(S^c)
Having bronchitis (B)	50	10
Not having bronchitis (B^c)	20	20

a. **If one patient is selected at random from these patients, find the probability that this patient is**

   i. **P(non-smoker)**

   ii. **P(smoker who has chronic bronchitis)**

   iii. **P(smoker given that the patient has chronic bronchitis)**

   iv. **P(non-smoker given that the patient does not have bronchitis)**

b. **Are two events S, B independent?**

Q2. How many ways are there to put 5 x's and 4 o's on a tic-tac-toe board?

a. **Find number of ways to place 5 x's in 9 squares leaving 4 squares blank.**

b. **Find number of ways to put 4 o's in the remaining 4 empty slots.**

Q3.

2.116 From a group of 4 men and 5 women, how many committees of size 3 are possible

(a) with no restrictions?

(b) with 1 man and 2 women?

(c) with 2 men and 1 woman if a certain man must be on the committee?