

Ceng 272 - Quiz 2

Choose one question.

1. 100 patients in a certain hospital were randomly selected and asked if they smoke (S) or not (S') and whether they have chronic bronchitis (B) or not (B'). Based on this information

	S	S'
B	50	10
B'	20	20

- (a) If one patient is selected at random from these patients, find the probability that this patient is
- i $P(\text{non-smoker})$
 - ii $P(\text{smoker who has chronic bronchitis})$
 - iii $P(\text{smoker given that the patient has chronic bronchitis})$
 - iv $P(\text{non-smoker given that the patient does not have bronchitis})$
- (b) Are two events S, B independent?
2. 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?