Assignment II – Mathematical Computing [1]

Question 1: (10 marks)

A professor thinks students who live on campus are more likely to get As in the probability course. To check this theory, the professor combines the data from the past few years. 600 students have taken the course, 120 students have gotten As, 200 students lived on campus, 80 students lived off campus and got As.

(a). Does this data suggest that "getting an A" and "living on campus" are dependent or independent?

(b). If events A and B are independent. What is the condition for two events A and B, to be independent?

Question 2: (10 marks)

Suppose that I want to purchase a smart phone. I can choose either a large or a small screen; a 64GB, 128GB, or 256GB storage capacity, and a black or white cover.

(a) How many different options do I have?
(b) What are these options?

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[1] Submission is Friday 24th June 2022 before class session