Exercise 1 Calc. : ✗

In a city it is estimated that 1 in 10 people are allergic to gluten.
From the city, 6 people are chosen at random. Let X be the number of them who are allergic to gluten.

a) **Explain** why it is appropriate to assume that X follows a binomial distribution. | 1 mark

b) **Calculate** the probability that exactly 5 of the 6 people are allergic to gluten. | 2 marks

c) **Determine**, from the group of 6, the expected value of the number of people who are allergic to gluten. | 2 marks