1. A die is rolled until the sum exceeds 100. What is the probability that at least 12 rolls are necessary?

2. Let \( S = N_1 + \ldots + N_{60} \) be the number of logins onto a computer system in sixty minutes, where \( N_i \sim P(2) \) are independent Poisson counts for each of the one-minute intervals. Approximate \( P(S \geq 130) \), the probability that more than 130 logins are made.