(8.11) A certain sample has a true average counting rate of 100 cpm. What is the probability that 80 counts would be obtained in a 1 min recording?

From eqn (8.17)

$$N_{true} := 100 \qquad N_{obs} := 80 \qquad P_N := \left(2 \cdot \pi \cdot N_{true}\right)^{-\frac{1}{2}} \cdot e^{-\frac{1}{2} \cdot \frac{\left(N_{true} - N_{obs}\right)^2}{N_{true}}}$$

$$P_N = 5.399 \cdot 10^{-3} \qquad \text{or} \qquad P_N = 0.54 \cdot \%$$