

Answer on question #52803, Math / Statistics and Probability

Question I am playing a video game where an item I am after has a drop rate of 1/100. I have now had 692 chances at this item. How unlikely is that I have not yet received this item?

Solution So, let us find probability that after 692 times you have not yet received an item. Here we are dealing with binomial distribution, hence,

$$P = C_{692}^0 \cdot 0.01^0 (1 - 0.01)^{692} \approx 0.000954$$