1. If the prob of an object dropped from a certain height would hit the ground is 80% and 12 such objects are dropped then what is the variance?

It’s a binomial distribution problem.

P(Success) = P(Hiting the groun)

P(Failure)=P(Not hitting the ground)

Ans: variance=n\*p\*q=12\*0.80\*0.20

1. Avg Rate of patients arrives at the emergency dept is 6/hr. Find P(exactly 7 patients in 90 min)

It’s a pisson distribution problem.

6 per 60min

9 per 90 min

poisson.pmf(7,9) # probability of getting 7 people in the queue when the mean is 9