

STATISTICS APPLIED TO BUSINESS

PROFESSOR JOSEMARI SARASOLA

SPECIAL COVID-19 – 2020 MARCH

NORMAL APPROXIMATION TO POISSON (PROBLEMS)

Every hour (day and night) on average 0.9 coronavirus patients enter a hospital, randomly and with independence.

1. Which is the probability of entering more than 150 patients in one week?
2. Which is the probability of entering exactly 140 patients in one week?
3. How many patients can we ensure at most in one week with 0.9 probability?
4. If every patient need one mask, how many masks do we need for one week, in order to have enough masks for all patients with a 0.999 probability? In your opinion, why do we need a so big probability?
5. Every week we have to prepare a dossier for every patient that entered the hospital last week, in order to get information for research. If every worker can compose 4 dossiers every week, how many workers do we need every week in order to complete all the dossiers with a 0.99 probability?