

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
Department of Electrical Engineering & Computer Science
6.041/6.431: Probabilistic Systems Analysis
(Spring 2006)

Week 11
April 24-28 , 2006
Bernoulli process, Poisson process

Recitation 16 April 25

Problem 1: introduces Bernoulli process, demonstrates fresh start property.

Problem 2: relates negative binomial to Pascal r.v., alternate interpretations in last part.

Problem 3: rediscovers a result obtained using transforms by making use of a split Bernoulli process.

Recitation 17 April 27

Problem 1: introduces Poisson process, demonstrates use of pdf for the second arrival.

Problem 2: nice conceptual problem, demonstrates concatenation of disconnected intervals.

Problem 3: builds on previous problem, demonstrates independence of multiple arrivals.

Tutorial 10 April 27-28

two instructive drill problems, one Bernoulli, one Poisson.

Problem set 9, due May 3

Problem 1,2 : drill problems on Bernoulli process that give a chance to practice basic concepts without lengthy calculations

Problem 3 : drill problem on Poisson

Problem 4 : short problem demonstrates approximation of binomial by Poisson

Problem 5 : inference problem involving poisson process

Grad Problem : this is a good problem, solutions are online, grad students will benefit by trying to solve it
