

# Homework 7

Math 382 Fall 2011

due: Sept. 15, 2011

From the Notes: Problems 3.8, 11, 12, 13.

## Problem 7A

Suppose that the four engines of a commercial airplane were arranged to operate independently and that the probability of in-flight failure of a single engine is 0.01. Find:

- a) Probability of no failures on a given flight.
- b) Probability of at most one failure on a given flight.
- c) The mean and variance for the number of failures on a given flight.