

**Instructions:** A printed copy of your homework should be handed in at **the start of class** the day it is due. Supplementary electronic files (e.g. R scripts or wxMaxima files;) should be emailed to the instructor prior to class with file name format LASTNAME-HWX.EXT

**1. (10 points)** Look up a probability distribution that (1) doesn't appear on the 'Example Probabilty Distributions' handout circulated in class on Monday (see the course website for the PDF), and that (2) is frequently used in some scientific field of interest (e.g. geology, education, physics, psychology, chemistry, etc.). Feel free to use books, journal articles, "experts", etc.

Write up a brief (less than 1 page, but more than a few lines) summary of that distribution that (minimally) includes the same kinds of information as provided in each column of the handout. Include a 'References' section at the end that lists any references used in preparing your summary (format them appropriately).

**2. (5 points)** 7.3a (See pg.242 in the text.)

**3. (5 points)** 7.3b

**4. (5 points)** 7.4

**5. (5 points)** 7.6b

**BONUS (3 points each):** Ch. 7.14a, 7.14b

**BONUS (3 points):** Compute the mean number of events in the interval  $[0,20]$  for 1000 replicates of the nonhomogeneous poisson process simulated in class on Monday (Nov 2). See course website for the R code from class.