Homework 3

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Due date: Tuesday, November 13

1. **Textbook problem 2.1** Listed below are values of survival time in years for 6 males and 6 females from the *WHAS100* study. Right-censored times are denoted by a "+" as a superscript.

   Males: 1.2, 3.4, 5.0^+, 5.1, 6.1, 7.1

   Females: 0.4, 1.2, 4.3, 4.9, 5.0, 5.1^+

   Using these data, compute the following **without a software package**:

   a. (2 pts) The Kaplan-Meier estimate of the survival function for each gender.
   b. (2 pts) Pointwise 95 % confidence intervals for the survival functions estimated in problem (1a).
   c. (2 pts) Pointwise 95 % confidence interval estimates of the 50th percentile of the survival time distribution for each gender.
   d. (2 pts) The estimated mean survival time for each gender using all available times, upto 7.1.
   e. (2 pts) A graph of the estimated survival functions for each gender computed in problem (1a) along with the point wise and overall 95 % limits computed in problem (1b).