

WS #15 - Hazard function

Math 150, Jo Hardin

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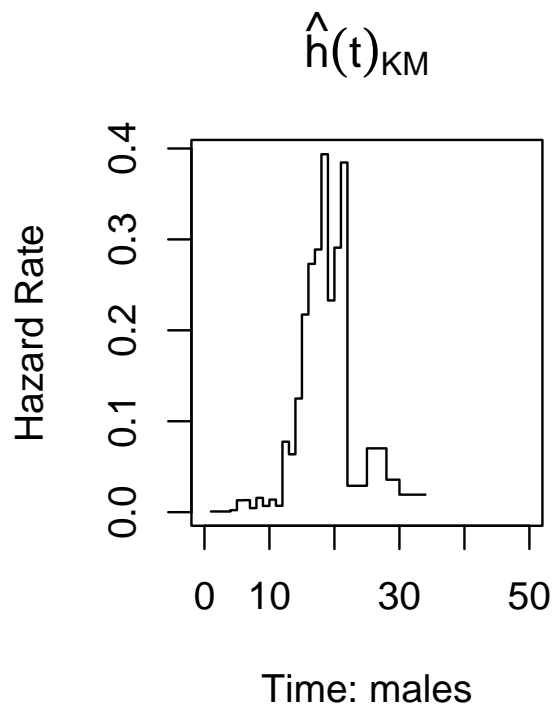
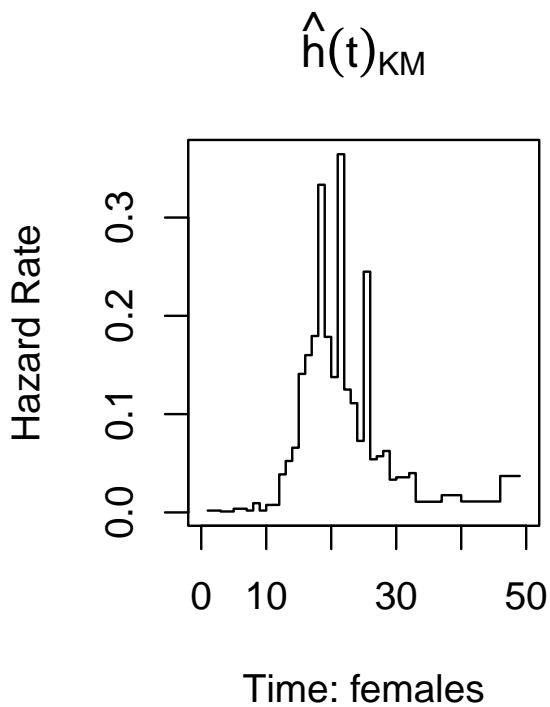
Your Name: _____

Names of people you worked with: _____

What is the best on-campus job?

Task: The two curves below represent the KM hazard rate functions for age at first drink for samples of males and females.

- Describe what you see in the curves.
- Give one difference between the two curves.
- Give one similarity between the two curves.



Solution:

a. What do the curves show?

- Note that the y-axis is *not* a probability. It is an instantaneous rate.
- At a given age, the y-axis represents the rate of first

b. Differences:

- Males are at higher risk below 20, females are at higher risk after 20.
- The age at which females have their first drink is more spread out than for males.
- Females are still at risk even as old as 50.

c. Similarities:

- We see that generally the first drink happens between 15 and 25.
- There are peaks (meaning a high rate or risk) at ages like 18, 21, and 25.
- Both groups have very low rates below 10 years old.