L35: April 26 (Weds)

Housekeeping:
- Homework due today (A20)
- —"— Friday (A21)
- Extra credit: Infographic
- —"—: Poisson distribution
- Final essay due 11:59 p.m. Fri., May 5 (on Canvas)
- Section 01: Exam 3 on Fri, May 5 at 10:30 a.m. in this room
- Section 02: Exam 3 on Fri., May 5 at 1:00 p.m. in this room.

Last time: Introd. to cts. r.v.'s; uniform distribution

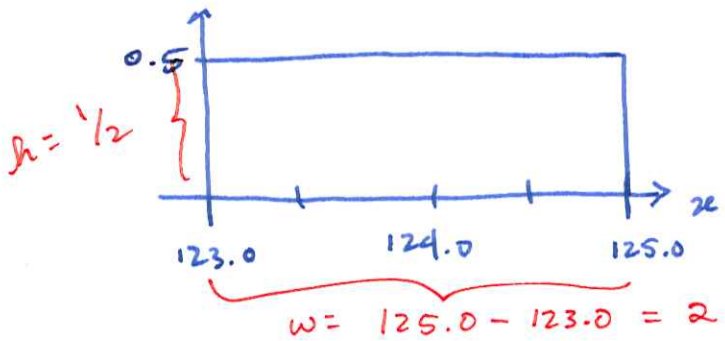
This time: same...

L35, ct'd.

Recall: A cts. r.v. has the uniform distribution if its values are evenly (or... UNIFORMLY) spread about the range of possible values.

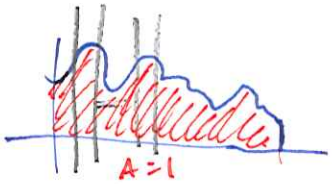
Example: National Grid provides electricity with voltage levels uniformly distributed between 123.0 and 125.0 volts. (Any voltage amount is possible, and the values are spread uniformly in the range.)

The graph of the distribution/density of X is:



$w \cdot h = 1$

$h = \frac{1}{w}$



The graph of a cts. probability distribution (like the uniform distribution) is called a PROBABILITY DENSITY CURVE. A density curve must satisfy the following requirements:

- Every point on the curve must have vertical height 0 or greater (i.e., cannot go below x-axis)
- Total area under curve must be 1.