

L10: Feb. 8, 2017.

V

Housekeeping.

- Assignment 6 due today
- Book project: your only homework for Friday is to sign up for project group on Canvas.

(Find the tutorial under Assignment 7 tonight.)

- 1<sup>st</sup> exam: 1 week from Friday!

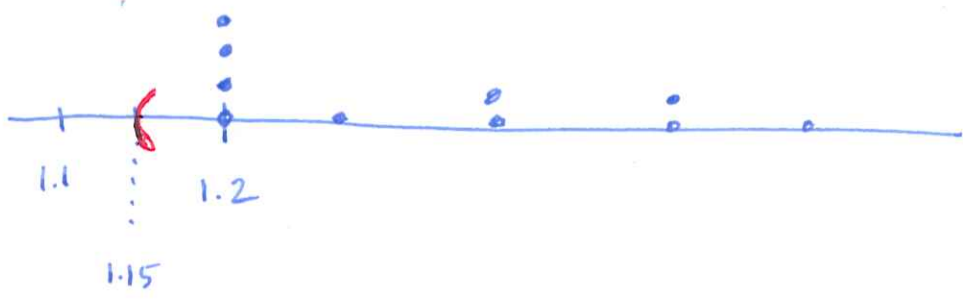
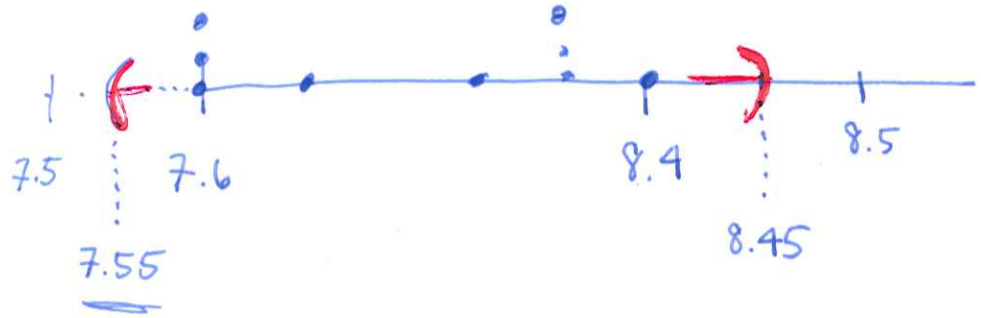
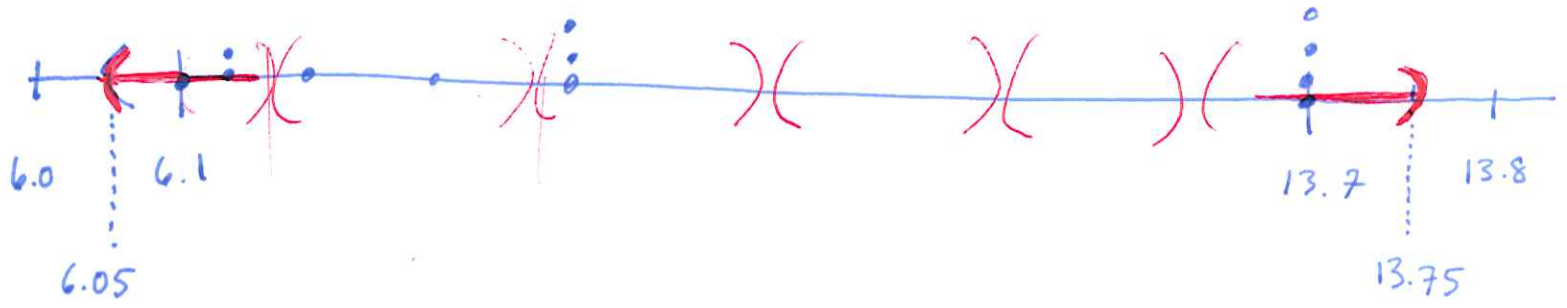
Last time: • Descriptive Statistics

Question?

This time: • Creating a histogram...

L10, ctd

1a



Example  
2.7, p. 78

Data are heights in inches, to nearest  $\frac{1}{2}$ -in.,  
of 100 male semi-pro. soccer players.

- Smallest data pt. is 60.0, so start the 1<sup>st</sup> interval at 59.95.
- Largest is 74.0, so end the last interval at 74.05.
- Have 100 data points — maybe want  $\sqrt{100} = 10$  bars/classes?

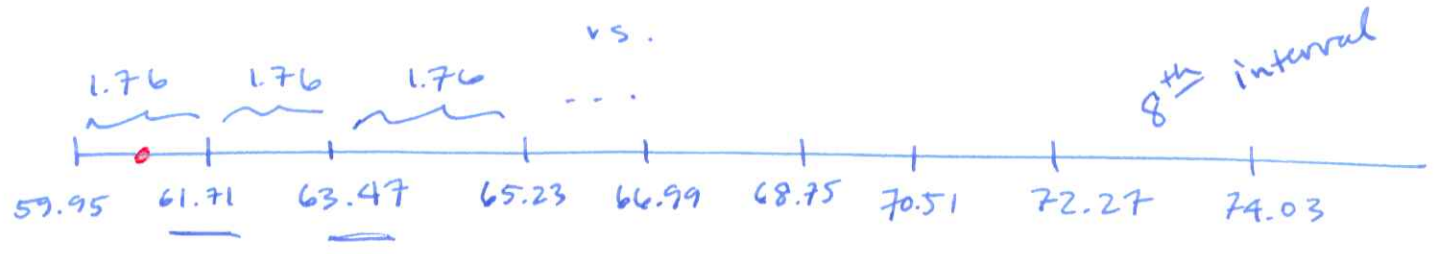
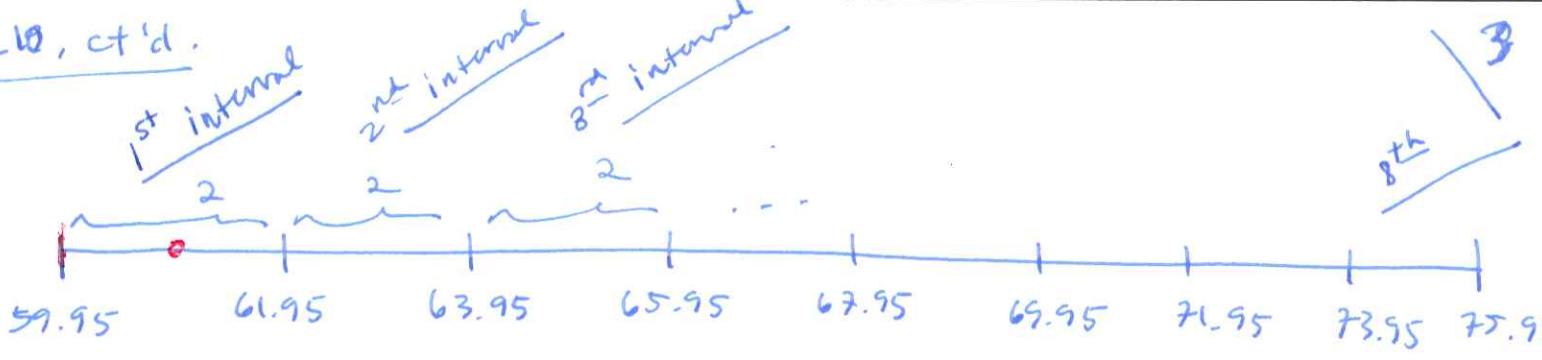
Maybe someone tells us we want eight classes? Okay, 8...

Calculate the width of each interval:

$$\frac{74.05 - 59.95}{8} \approx 1.76$$

Check to see that the boundaries don't fall exactly  
on (too many) data points. If they do, then  
consider rounding the width of the class intervals,  
e.g., make them 2, not 1.76:

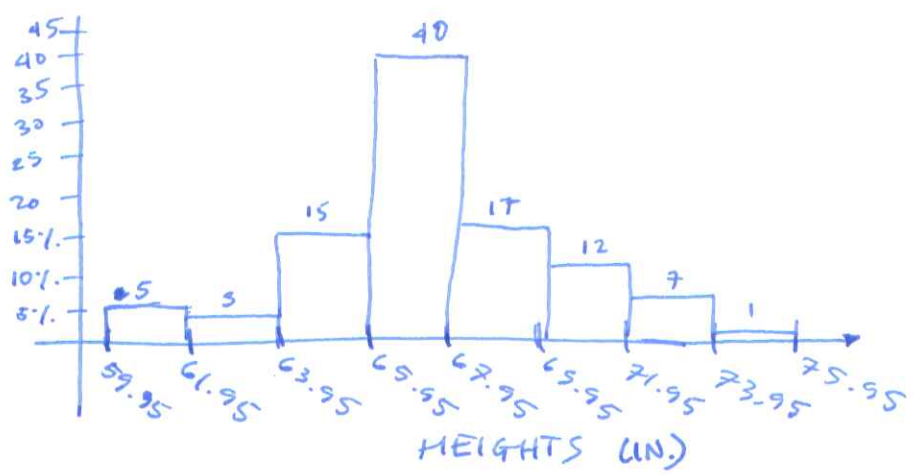
LB, ct'd.



Then sort the data into the table:

Heights	# of players in that range	% of players in that range
59.95 - 61.95	5	$5/100 = 5\%$
61.95 - 63.95	3	$3/100 = 3\%$
63.95 - 65.95	15	$15/100 = 15\%$
65.95 - 67.95	40	40%
67.95 - 69.95	17	17%
69.95 - 71.95	12	12%
71.95 - 73.95	7	7%
73.95 - 75.95	1	1%
TOTAL:	100	100%

then graph:  
or... # of players in class?  
REL. FREQ. (%)



<sup>110</sup>  
Ex. 2.7, ct'd.

Try it  
2.7, p. 79

Shoe sizes of 50 male students.

DOES THE SHAPE OF THE HISTOGRAM  
CHANGE, DEPENDING ON WHETHER  
THE VERTICAL AXIS IS RELATIVE OR  
ABSOLUTE FREQUENCY?