

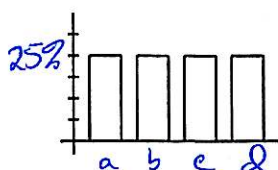
Math 10 Spring 2010 Quiz 3

Name: Key

April 16, 2010

(1) Suppose I tell you the five-number summary (see (2a) below) of a particular data set is 0, 5, 6, 7, 10.

2 (a) Label the y-axis on the following percentage histogram and say what outcome ranges the bars represent.



a: 0-5  
b: 5-6  
c: 6-7  
d: 7-10

2 (b) Is the histogram in (a) well-designed? If not, what is its major flaw?

No, the ranges the bars represent are not the same size  
[also, it tells us nothing the 5-number summary & Q net.]

(2) The answers to this question relate to the forearm length homework calculations. Please round to one decimal place.

3 (a) What is the 5-number summary of the data? (minimum, 1st quartile, median, 3rd quartile, maximum)

16.1, 18.1, 18.8, 19.6, 21.4

3 (b) What is the formula to convert this data into standard units? (Please give it as a function of  $x$ , where  $x$  is some point in the data set.)

$$\frac{x - 18.8}{1.1} \quad (18.8 = \text{mean})$$

$$(1.1 = \text{SD})$$

2 (c) If instead of the given data set, you had data giving the sum of the lengths of both forearms of adult males, what would you expect the mean and standard deviation to be, approximately?

about twice what they are for this data set, so  
mean  $\sim 37.6$   
SD  $\sim 2.2$