Quiz 1

You are welcome to use a calculator for this quiz but realize the incorrect answer with no supporting work will receive no partial credit.

1. [2] The radio audience rating service Arbitron places the country's 13,838 radio stations into categories that describe the kind of programs they broadcast. The following is some of the data provided in Moore's Statistics book as example 1.2:

Format	Oldies	Rock	Country	Religious	News/Talk
Count of stations	1060	869	2066	2014	2179

Let's say that you plan to buy radio time to advertise your Web site for downloading MP3 music files. How helpful is the above data? Why?

answer (+½)
reason (+½)
reasonable reason (+½)

Not at all helpful,

You are interested in contacting people. Just because one category of radio station has a lot of stations doesn't mean that the category will reach a lot of people.

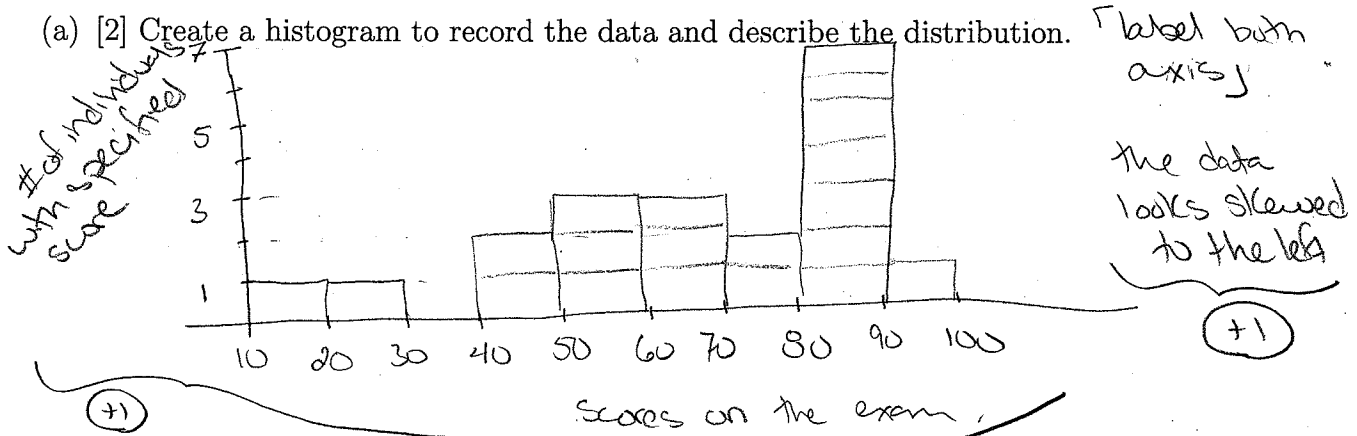2. [2] What possible values can the standard deviation s possibly take?

Ch 2 #20

Any non negative number

partial +3/2 positive #
+2/2 numbers,
+1/2 describe s.d.

3. A UO instructor gave an exam in Math 111 to 20 students that yielded the following scores:

$$16 \quad 28 \quad 41 \quad 42 \quad 50 \quad 52 \quad 52 \quad 65 \quad 66 \quad 69$$
$$70 \quad 70 \quad 80 \quad 81 \quad 82 \quad 84 \quad 85 \quad 87 \quad 89 \quad 97$$

(a) [2] Create a histogram to record the data and describe the distribution. ⌐label both axis⌐

the data looks skewed to the left

(+1)

# of individuals with a specified score

Scores on the exam

(+1)

(b) [1] Calculate the 5 number summary of the above data.

16   51   69.5   83   97   form (+½) got it all (1½)

(c) [1] Calculate the mean ($\bar{x}$) and the standard deviation (s). ⌐round to the nearest whole #⌐

$$\bar{x} = 65.3 \implies 65$$
$$s = 21.9 \implies 22$$

(d) [1] Is the information summarized by $\bar{x}$ and s or by the 5 number summary a better description of the data?

<u>5 # summary</u> (+½)   <u>b/c the data is skewed to the left.</u> (+½)

(e) [1] What is the relation between the mean and the median? Is it what you expected?

(+½) { The mean is smaller than the median.
(+½) { I did expect this since the data looks skewed to the left.

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