

Name: Key

Math 345 Elementary Statistics – Crawford

Quiz 2-C/A

21 February 2018

Books and notes (in any form) are not allowed. *Show your set-up and work.* Good Luck!

1. (6 pts) The following data gives the total home game playing time (hours) for all Major League Baseball teams in a recent year (based on data from Baseball Prospectus).

236 237 238 239 241 241 242 245 245 245 246 247 247 248 248
249 250 250 250 251 252 252 253 253 258 258 258 260 262 264

(a). Use a class width of 5 hours and a starting time of 235 to

(i) Construct a frequency distribution

Playing Time (hours)	Freq.
235 - 239	4
240 - 244	3
245 - 249	9
250 - 254	8
255 - 259	3
260 - 264	3

total 30

(ii) Construct a relative frequency distribution.

Playing Time (hours)	Rel. Freq.
235 - 239	13.3%
240 - 244	10.0%
245 - 249	30.0%
250 - 254	26.7%
255 - 259	10.0%
260 - 264	10.0%

+ 4/30
+ 3/30
etc.

(b). If you wanted 8 classes, determine the class width. [Do not construct the frequency distribution.]

$$\frac{264 - 236}{8} \approx 3.5 \Rightarrow$$

Class Width 4

2. (3 pts) Answer the following questions about types of data and sampling.

(a). Determine whether the data described below is from a *discrete* or *continuous* data set.

A device is used to record the length of time drivers look at their phones while driving.

continuous

(b). Determine whether the type of sampling used below is random, systematic, convenience, stratified, or cluster.

A Homeowner's Association sends a survey to all the homeowners in the association to see if they would like the snow removal contractors to start using pet-friendly ice melt.

convenience

3. (6 pts) The data below gives the cost in dollars for a marriage proposal package at the different Major League Baseball stadiums. (Five stadiums don't allow proposals.)

39 50 50 50 55 55 75 85 100 115 175 175 200
209 250 250 350 400 450 500 500 500 500 1500 2500

(a). Find each of the following. [You may use the STAT/LIST features of your calculator, when possible.]

mean

365.3

median

200

mode

500

midrange

$$\frac{2500 + 39}{2} = 1269.5$$

(b). Do any of the data values seem like outliers? If so, which one(s)?

Yes, 1500 & 2500