

Name: Key

Math 345 Elementary Statistics – Crawford

Quiz 2-B/D
21 February 2018

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

1. (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 number of texts a driver reads while driving.

discrete

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

A landscaper is testing the soil in a large lawn for fungal growth by taking samples every four feet on a square grid.

Systematic

2. (6 pts) The data below gives the cost in dollars for a marriage proposal package at 25 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

$\bar{x} = 365.3$

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

3. (6 pts) The following data gives the IQ Scores for 30 randomly selected people.

51 64 72 72 78 80 81 85 86 90 91 91 91 98 100
 102 104 106 106 106 106 108 109 111 115 115 116 125 128 139

(a). Use a class width of 20 and a starting score of 50 to

(i) Construct a frequency distribution

(ii) Construct a relative frequency distribution.

IQ	Frequency
50 - 69	2
70 - 89	7
90 - 109	14
110 - 129	6
130 - 149	1

Note: total is 30

IQ	Rel. Freq.
50-69	6.7%
70-89	23.3%
90-109	46.7%
110-129	20.0%
130-149	3.3%

$\frac{2}{30} \cdot 100$
 $\frac{7}{30} \cdot 100$
 etc.

(b). If you wanted 6 classes, determine the class width. [Do not construct the frequency distribution.]

$$\frac{139 - 51}{6} \approx 14.67 \Rightarrow$$

Class Width 15