East Los Angeles College Department of Mathematics

Math 227 Test 1 Solutions

240

Show work for credit.

Question- How many absences do you have in your Statistics class? The following data was sampled.

0, 4, 3, 3, 2, 0, 1

1. Determine the mean of this data approximated to the nearest tenths.

 $\overline{x} = \frac{2x}{n} ; \overline{x} = \frac{13}{7}$ $|\overline{x} \approx 1.9 | /$

2. Determine the median of this data.

p, p, X, [2], x, x, X

3. Determine the mode for this data.

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4. Determine the variance for this data approximated to the nearest tenths.

 $var = \frac{n z_{x^{2}} - (z_{x})^{2}}{n(n-1)}, \quad var = \frac{7.39 - 13^{2}}{+(6)}$

5. Determine the standard deviation for this data approximated to the nearest tenths.

SD= \(\sigma\)', SD= \(\frac{72-S}{SD \times 1.6}\)

Question- How long did you wait in line to buy your Statistics Textbook? The following data was gathered in minutes.

3, 2, 3, 11, 10, 4, 4, 5, 0, 2, 22, 3, 2, 0, 7, 21, 22, 4, 5, 5, 5, 8, 12, 15, 12, 8, 20, 4, 6, 12, 16, 12, 14, 20, 8, 16, 8, 14, 23, 14, 20, 22, 20, 12, 23, 16, 22, 10

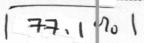
6. Create a relative frequency table and organize your lata into bins with a bin width of 6 and the first bin having a lower bin limit of 0. Approximate each relative frequency to the nearest thousandths.

	See work	for tally	
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1	O to S	طل	0.333
1	6 to 11	9	0.198
1	12 to 17	12	6.750
V	18 to 23	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	0.229 V

Answer the following questions regarding your data while using a relative frequency approximated to the nearest thousandths.

7. What percent of statistics students waited at least 6 minutes?

8. What percent of statistics students waited less than minutes?



9. What percent of statistics students waited between 6 and minutes?

10. What percent of statistics students waited at no more than 11 minutes?

11. What is the mean for this distribution of grouped data? Approximate to the nearest tenths.

$$\overline{x} = \frac{816}{48}$$

- X = 2fm , X = 516 [= 210.8]
- 12. What is the variance for this distribution of grouped data? Approximate to the

$$Var = N \leq fm^2 - (2 fm)^2,$$

nearest tenths.

$$Var = N \le fm^2 - (z + m)^2$$
, $Var = 48.7896 - 516^2$
 $Var = N = 100$

13. What is the standard deviation for this distribution? Approximate to the nearest tenths.

14. Compute the GPA for the following report card. App oximate your answer to the nearest hundredths.

Course	Units	Grade
Statistics	4	Α
English	3	D
PE	1	В
Chemistry	5	F
Health	2	С

$$\overline{\omega} = \frac{2S}{1S}$$

$$\overline{\omega} = \frac{1.73}{1}$$

х	x^2
0	0
4	16
3	9
3	9
2	4
0	0
1	1

Sum

0 to 5 16 0.333 33.3 2.5 40 10 6 to 11 9 0.188 18.8 8.5 76.5 650. 12 to 17 12 0.250 25.0 14.5 174 252 18 to 23 11 0.330 33.0 30.5 30.5	Data	f	rf	percent	m	fm	fm^2
6 to 11 9 0.188 18.8 8.5 76.5 650. 12 to 17 12 0.250 25.0 14.5 174 252	0 to 5	16	0.333	The second secon			
12 to 17	6 to 11	9	0.188				
18 to 23 11 0.220 22.5	12 to 17	12	0.250				
	18 to 23	11	0.229	22.9	20.5	225.5	4622.75

Sum

W

Course	Units	Grade	X	WX
Statistics	4	A	4	16
English	3	D	1	3
PE	1	В	2	2
Chemistry	5	F	0	0
Health	2	С	2	4

Sum