East Los Angeles College
Department of Mathematics
Math 227
Test 1

Show work for credit.

How many absences do you have in your Statistics class?

The following data was collected in days.

6, 3, 0, 6, 2, 6, 6

1. Determine the mean of this data approximated to the nearest tenths.
2. Determine the median of this data.
3. Determine the mode for this data.
4. Determine the variance for this data approximated to the nearest tenths.
5. Determine the standard deviation for this data approximated to the nearest tenths.

How long did you wait in line (minutes) to buy your Statistics Textbook?

The following data was gathered and organized into a frequency table. Fill in the table below and approximate the **relative frequency** to the nearest **thousandths**.

Min	f	rf	Percent	m
0 to 4	6			
5 to 9	12			
10 to 14	14			
15 to 19	8			
20 to 24	6			

Using the table above, what percent of the students waited for:

6. At least 5 minutes?
7. No more than 9 minutes?
8. Between 5 and 19 minutes?
9. More than 14 minutes?
10. Less than 15 minutes?

11. What is the mean for this distribution? Approximate to the nearest tenths
12. What is the variance for this distribution? Approximate to the nearest tenths
13. What is the standard deviation for this distribution? Approximate to the nearest tenths.
14. Create a Histogram describing this distribution.
15. Create a frequency polygon describing this distribution.

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16. Determine who had the better GPA for the semester. Hannah Montana or Miley Cyrus? Approximate the GPA's to the nearest hundredths.

Hannah Montana

Course	Units	Grade
Statistics	4	A
English	3	C
PE	1	B
Chemistry	5	F
Health	2	D

Miley Cyrus

Course	Units	Grade
Statistics	4	B
English	3	C
PE	1	F
Chemistry	5	D
Health	2	A

Grading on a curve?

17. Test scores were gathered and a mean was determined to be 118.2 with a standard deviation of 20.4. Approximate z-scores to the nearest hundredths.

Name	Test Score	Z-Score	Standard Grade	Curved Grade
Maria	150			
Jessica	138			
Eric	123			
Lyle	110			
Francis	92			
Sam	36			

The following data represents IQ Scores

IQ Scores		L	Sorted IQ Scores
100		1	75
75		2	85
89		3	86
120		4	86
134		5	88
120		6	89
100		7	90
118		8	93
98		9	95
90		10	96
102		11	98
104		12	100
120		13	100
88		14	100
100		15	100
86		16	100
95		17	102
93		18	104
106		19	105
110		20	106
100		21	110
96		22	110
116		23	112
85		24	115
120		25	116
105		26	118
115		27	120
110		28	120
112		29	120
86		30	120
120		31	120
100		32	134

Determine:

18. P_{10} 19. Q_1 20. Q_2

21. Q_3 22. P_{90} 23. D_4

24. What is the 5-number summary?

$(Min, Q_1, Q_2, Q_3, Max)$

25. What is the Interquartile Range?
$IQR = Q_3 - Q_1$

26. What is the Semi-Quartile Range?

$$SQR = \frac{Q_3 - Q_1}{2}$$

27. What is the Mid-Quartile Range?

$$MQR = \frac{Q_1 + Q_3}{2}$$

28. What is the 10-90 Percentile Range?

$10 - 90\ Percentile\ Range = P_{90} - P_{10}$

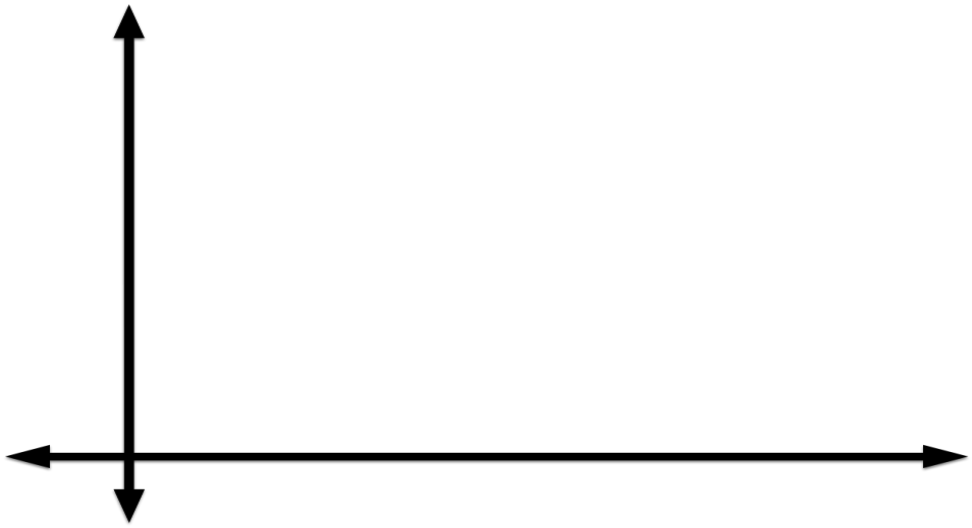
29. What is your name?

Answer Sheet

1		16	
2		17	
3		18	
4		19	
5		20	
6		21	
7		22	
8		23	
9		24	
10		25	
11		26	
12		27	
13		28	
14	Use Graph	29	
15	Use Graph		

Graph Paper

14.



15.