

Math 206 - Quiz 5

March 3, 2010

Name key

Score _____

Show all work to receive full credit. Supply explanations when necessary.

- (1 point) Harry recently invested some of his money in the stock market. He bought several hundred shares of a certain stock, and he tracked the performance of the stock over several days.

Day	0	1	2	3	4	5
Value	\$14.50	\$14.00	\$15.50	\$16.00	\$15.50	\$16.50

SEE ATTACHED SHEET.

On a separate sheet of graph paper, sketch the line graph corresponding to Harry's data. In one sentence, tell why a line graph is an appropriate way to display Harry's data.

LINE GRAPHS ARE USED TO SHOW TRENDS OVER TIME.

- (1 point) Find the standard deviation in the values of Harry's stock.

$$\bar{X} = \frac{92}{6} = 15\frac{1}{3}$$

$$S = \sqrt{\frac{(14.5 - 15\frac{1}{3})^2 + (14 - 15\frac{1}{3})^2 + 2(15.5 - 15\frac{1}{3})^2 + (16 - 15\frac{1}{3})^2 + (16.5 - 15\frac{1}{3})^2}{6}}$$

$$= \sqrt{0.72} = 0.8498$$

- (2 points) Find the median, the quartiles, and the interquartile range of the following data. Also sketch the boxplot. (Don't worry about outliers.)

~~10, 18, 12, 20, 24, 21, 18, 19, 10, 14, 17, 20, 21, 23, 14~~

10, 10, 12, 14, 14, 17, 18, 18, 19, 20, 20, 21, 21, 23, 24

\uparrow \uparrow \uparrow
Q₁ = 14
Med = 18
Q₃ = 21

IQR = 21 - 14 = 7

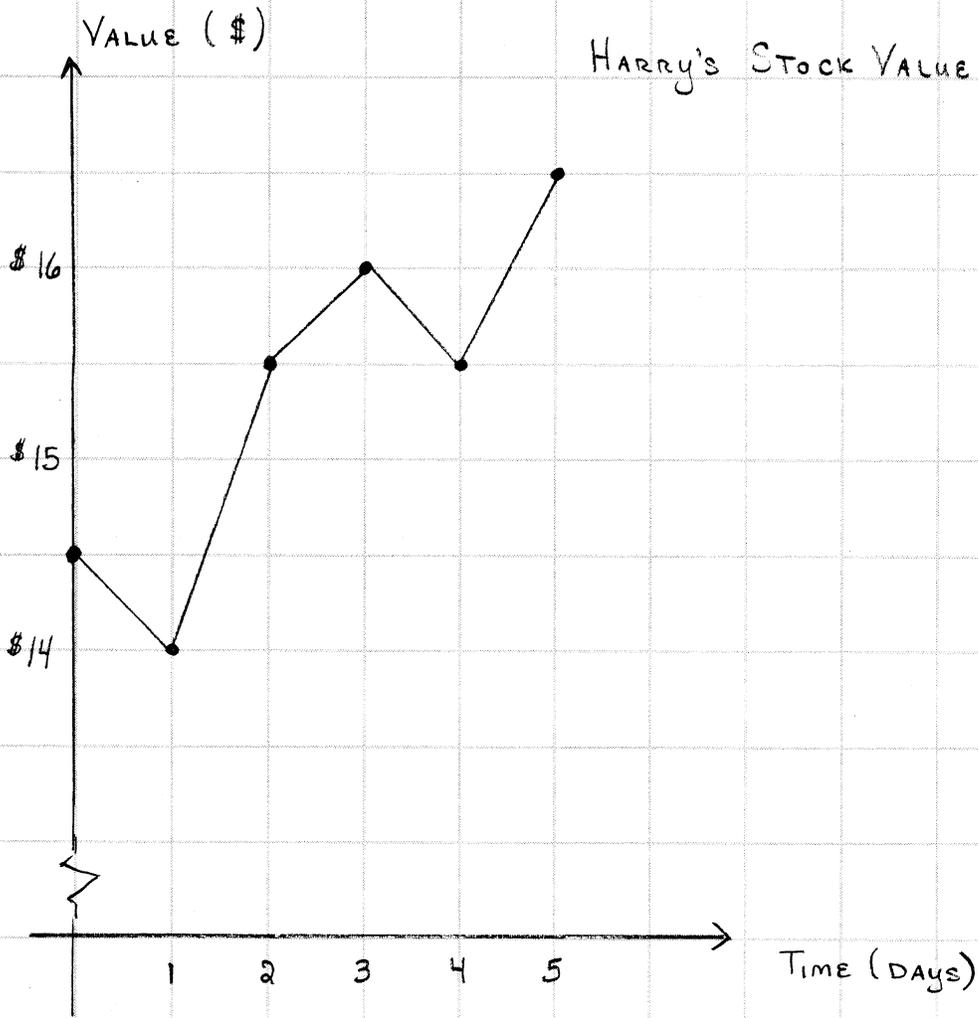
SEE BOXPLOT ON ATTACHED SHEET.

- (1 point) On a separate sheet of graph paper, construct a frequency table and a histogram for the following collection of test scores.

~~96.0 78.5 76.0 82.5 74.0 69.0 48.5 72.5 83.0 95.5~~
~~75.5 52.0 65.0 76.0 81.0 57.5 77.0 78.5 91.0 88.0~~

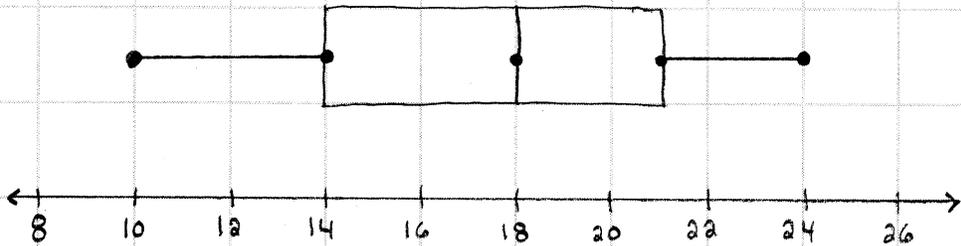
SEE ATTACHED SHEET

#1



#3

Boxplot For Problem 3.



#4

INTERVAL	Frequency
0-10	0
10.5-20	0
20.5-30	0
30.5-40	0
40.5-50	1
50.5-60	2
60.5-70	2
70.5-80	8
80.5-90	4
90.5-100	3

TOTAL : 20

