**HW 6 – BAR GRAPHS, HISTOGRAMS AND DOT PLOTS** NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. The table lists blood types in a sample of hospital patients. Complete the relative frequency table, then construct a **BAR GRAPH** for the relative frequency data.

|  |  |  |
| --- | --- | --- |
| BLOOD TYPE | FREQUENCY | RELATIVE FREQUENCY |
| O | 22 |  |
| A | 19 |  |
| B | 6 |  |
| AB | 3 |  |

2. In a survey, 20 voters were asked their age. The results are summarized in the frequency table below. Complete the relative frequency table and construct a **HISTOGRAM** for the relative frequency data.

|  |  |  |
| --- | --- | --- |
| AGE OF VOTER | # OF VOTERS | RELATIVE FREQUENCY |
| 20-29 | 5 |  |
| 30-39 | 5 |  |
| 40-49 | 6 |  |
| 50-59 | 0 |  |
| 60-69 | 4 |  |

3. The students in Mrs. Teacher’s Spanish class received the following scores on a test. Construct a **HISTOGRAM** to represent the data. Use 4 classes with a class width of 10 and begin with a lower class boundary of 60.

75 94 87 83 78 72 65 75 82 78 97 72 87 94 72 83 87 95 85 97 69

|  |  |
| --- | --- |
| SCORES | FREQUENCY |
|  |  |
|  |  |
|  |  |
|  |  |

Create a new frequency table and **histogram** using a class width of 5 and a lower class boundary of 60.

|  |  |
| --- | --- |
| SCORES | FREQUENCY |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

4. Below are the prices of snowboards at two competing snowboard stores:

 **Middletown Snowboards Snowboard Central**

 **345, 350, 356, 360, 375, 405 343, 370, 386, 392, 395, 402**

a. Identify the 5 number summary of each set of data.

b. Draw a double box-and-whisker plot of the above data using a scale from 340 – 410 by 10s.

c. What is the median price for a snowboard at Middletown Snowboards?

d. What is the range of prices for snowboards at Snowboard Central?

e. Which price represents the 75th percentile for Middletown Snowboards?

f. Which store would you rather buy a snowboard from? Why?

5. The accompanying box-and-whisker plot represents the cost, in dollars, of twelve CD’s.

a. Which cost is the upper quartile?

b. What is the range of the costs of the CD’s?

c. How many CD’s cost between $14.50 and $26.00?

d. How many CD’s cost less than $14.50?

6. The box-and-whisker plot drawn below shows the marks achieved by students in a class, on their end of year exam.

a. State the median.

b. Find the interquartile range.

c. About what percent of students failed the test? Explain.

d. What is the mean test score?

7. A movie theater recorded the number of tickets sold daily for a popular movie during the month of

 June. The box-and-whisker plot shown below represents the data for the number of tickets sold, in

 hundreds. Which conclusion can be made using this plot?

(1) The second quartile is 600.

(2) The mean of the attendance is 400.

(3) The range of the attendance is 300 to 600.

(4) Twenty-five percent of the attendance is between 300 and 400.

8. Create a box plot from the set of numbers:

5,40,42,46,48,49,50,50,52,53,55,56,58,75,102