

# Assignment

## Write

Complete each statement.

1. A \_\_\_\_\_ is a graphical way to display quantitative data using vertical bars.
2. A \_\_\_\_\_ displays the data distribution based on a five number summary.
3. A \_\_\_\_\_ is a graph that shows how data are distributed using a number line.
4. For a set of data, the \_\_\_\_\_ consists of the minimum value, the first quartile, the median, the third quartile, and the maximum value.
5. The number of data values included in a given bin of a data set is called the \_\_\_\_\_.
6. The bar width in a histogram that represents an interval of data is often referred to as a \_\_\_\_\_.

## Remember

A dot plot is useful for organizing a small number of data points. A histogram is effective in displaying large amounts of data. Box-and-whisker plots are effective for visually comparing two data sets.

## Practice

1. Mr. Follweiler finished grading the quizzes for one of his Algebra 1 classes. The table shown is the recorded grades of the class.
  - a. Mr. Follweiler is worried that his students may not have understood the material covered on the quiz. He would like to get a better idea of how the class did as a whole. Would you recommend that he make a dot plot, a box-and-whisker plot, or a histogram to display this data? Explain your reasoning.
  - b. Construct a dot plot and histogram of the data in the table.
  - c. What information does the dot plot provide that the histogram does not?
  - d. The students argue that more than half the students failed the quiz, so they think Mr. Follweiler should let them retake it. A grade of 56 is failing. Construct a box-and-whisker plot of the data. Are the students correct? Explain your reasoning.

Student	Grade	Student	Grade
A	85	N	53
B	89	O	71
C	66	P	90
D	74	Q	65
E	77	R	55
F	72	S	98
G	64	T	53
H	55	U	62
I	61	V	55
J	52	W	64
K	81	X	62
L	61	Y	56
M	71	Z	87

## Stretch

George bowls in tournaments on the weekends. He recorded the scores of each game for his last two tournaments. A perfect score is 300.

Tournament 1: 182, 197, 178, 272, 180, 188, 202, 179, 191

Tournament 2: 188, 195, 177, 192, 180, 187, 201, 183, 197

Calculate the five-number summary and IQR for the two tournaments. Interpret your findings.

## Review

1. The table shows an example of a rabbit population.

Year	0	1	2	3	4	5	6
Population	4	11	29	79	213	577	1557

- Create a scatter plot of the data.
  - What is the regression equation? Graph the equation on the grid with the scatter plot.
  - How did you determine what type of function to use?
  - What do you predict the rabbit population will be in the 20<sup>th</sup> year? Explain your reasoning.
- Rewrite the expression  $7^{\frac{3}{4}}$  using a radical.
  - Rewrite the expression  $(\sqrt[6]{16})^5$  using a rational exponent.