## **Histograms and Box Plots Homework**

## Name:

Algebra 1

- 1. Twenty-five people were attending an event. The ages of the people are indicated below: 3, 3, 4, 4, 4, 5, 6, 6, 6, 6, 6, 6, 6, 7, 7, 7, 7, 7, 7, 7, 16, 17, 22, 22, 25
  - a. Create a histogram of the ages using the provided axes.



- b. Would you describe your graph as symmetrical or skewed? Explain your choice.
- c. Identify a typical age of the twenty-five people.
- d. What event do you think the twenty-five people might have been attending? Use your histogram to justify your conjecture.

- A different forty people were also attending an event. The ages of the people are:
  6, 13, 24, 27, 28, 32, 32, 34, 38, 42, 42, 43, 48, 49, 49, 49, 51, 52, 52, 53,
  53, 53, 54, 55, 56, 57, 57, 60, 61, 61, 62, 66, 66, 66, 68, 70, 72, 78, 83, 97
  - a. Create a histogram of the ages using the provided axes.



b. Would you describe your graph of ages as symmetrical or skewed? Explain your choice.

- c. Identify a typical age of the forty people.
- d. What event do you think the forty people were attending? Use your histogram to justify your conjecture.
- e. How would you describe the differences in the two histograms?

3. Twenty-two juniors from River City High School participated in a walkathon to raise money for the school band. The following box plot was constructed using the number of miles walked by each of the twenty-two juniors.



a) What do you think the box plot tells us about number of miles walked by the twenty-two juniors?

- b) How would you describe the shape of this distribution?
- c) What is the median of this set of data?
- d) Do you think the mean would be greater than, equal to, or less than the median? Justify your answer.

4. Solve the system of equations using any strategy you choose (elimination/addition or graphing or substitution etc.) Show your work!

$$x + 2y = 4$$
$$3x - 2y = 20$$

5. Solve for x: 
$$3(x+5) - 2x = 6 - 2(x+1)$$

6. Solve for x: 
$$\frac{x}{3} + 6 = 2x - 1$$