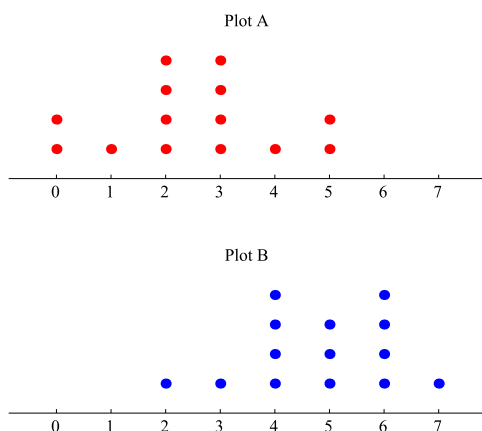# 7.SP.3: Worksheet
Solutions

The students in two seventh grade classes were asked, "How many hamsters have you seen on the side of the road in the past month?" The data was collected and a dot plot was created for each class. The two dot plots are shown in the graph below. (Class A's box plot is above class B's box plot.)

Plot A

Plot B

1. For what values do class A's distribution and class B's distribution overlap? The distributions overlap from 2 to 5 hamsters.

2. Which measure should be used to compare the centers of the distributions? The means

3. Which measure should be used to compare the spread of the two distributions? The mean absolute deviation

4. What is the mean of class A? 2.5 hamsters

5. What is the interquartile range of class B? Four pets

6. By how many pets is the center of class B's distribution greater than class A's center? The median number of pets in class B is two pets more than the median number of pets in class A.

7. Using the interquartile range of each class, compare the variabilities of the two classes. The interquartile ranges of both classes are three pets, so the two classes have approximately the same variability.

8. Express the difference between the two medians as a multiple of the interquartile ranges. The median of class B is $\frac{2}{3}$ of an interquartile range greater than the median of class A.

Numbers 9-10: The mean weight of the offensive linemen on the Roosevelt Middle School football team is 130 pounds with a mean absolute deviation of 10 pounds. The mean weight of the offensive linemen on the Taft Middle School football team is 150 pounds with a mean absolute deviation of 10 pounds.

9. By how many pounds is the mean weight of the offensive linemen on Taft's team greater than the mean weight of the offensive linemen on Roosevelt's team? 20 pounds

10. By how many multiples of the mean absolute deviation is the mean weight of the offensive linemen on Taft's team greater than the mean weight of the offensive linemen on Roosevelt's team? Two mean absolute deviations greater