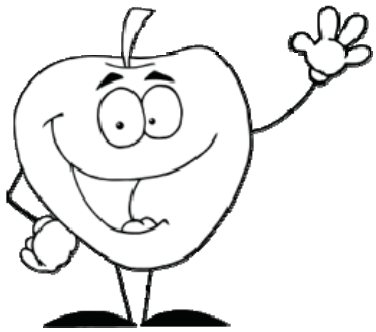
Name _____ Date _____

Assessing Overlapping Data Sets - Guided Lesson

Complete the following problems:

1) Alan wanted to compare the mean weight of boxes of his favorite apples and mangoes. He thinks that there will be a greater variability in the weight of apple boxes as compared to mango boxes.



Apple Boxes – Weight of Boxes in kg

2, 5, 4, 3, 8, 7

Mango Boxes – Weight of Boxes in kg

4, 3, 4, 8, 6, 9

The lightest box is 2 kg and the heaviest box is 9 kg.

a. Which fruit's boxes are heavier on average?

b. What is the difference of the average box weight of the two fruits?

c. At the store there are only three boxes of apples and mangoes left. The apple boxes weigh 3, 8, and 2 kgs each. The three mango boxes weigh 3, 8, and 9 kgs. Which fruit box has the greater variability of weight?

2) Jordan wanted to compare the mean number of correct answers on the last math and English quiz. He thinks that there will be a greater variability in the number of math problems correct as compared to English. He asked 6 friends their score and used his own scores.

Math – Number correct out of 10: 3, 7, 5, 6, 2, 1, 7

English – Number correct out of 10: 4, 8, 9, 2, 3, 6, 5

a. Which subject averaged the highest score?

b. What is the difference of the average number correct between subjects?

c. Jordan's three best friends scored 5, 2, and 7 correct on the math quiz. They got 3, 6, and 9 correct on the English quiz. Which quiz had a greater variability of success? Explain your answer.

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3) Donna lives right off a high speed road. The speed limit on her road is 80 miles per hour. She wanted to compare the mean speed of the cars between day time and night time.

Daytime car speeds (miles per hour): 80, 75, 64, 82, 78, 80, 76

Nighttime car speeds (miles per hour): 70, 73, 78, 80, 75, 85, 69

a. During which time of day are drivers driving faster?

b. Donna thinks that there will be a greater variability of speeds during the day as compared to night. Is she correct? Explain.