Practice with Measures of Center/Reading Dot Plots Name: _____

1. Find the mean, median and mode: 5, 9, 2, 6, 10, 4

2. What number can be added to the data set below so that the median is 16?

17, 9, 4, 16, 29, _____

3. What number can be added to the data set below so that the mode is 7?

5, 7, 3, 4, 4, 6, 7, 9, _____

4. Jae bought gifts that cost $24, $26, $20 and $18. She has one more gift to buy and wants her mean cost to be $24. What should she spend for the last gift?

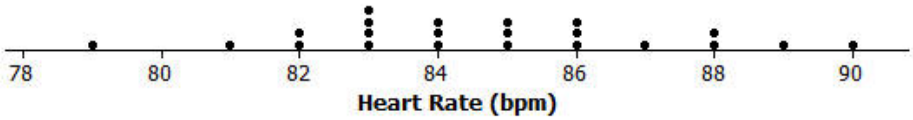
5. Mia, a 6th grader at Roosevelt Middle School, was thinking about joining the middle school track team. She read that Olympic athletes have lower resting heart rates than most people. She wondered about her own heart rate and how it would compare to other students. Mia was interested in investigating the statistical question: "What are the heart rates of the students in my 6th grade class?"

Heart rates are expressed as bpm (or beats per minute). Mia knew her resting heart rate was 80 beats per minute. She asked her teacher if she could collect the heart rates of the other students in her class. With the teacher's help, the other 6th graders in her class found their heart rates and reported them to Mia. Following are the heart rates (in beats per minute) for the 22 other students in Mia's class:

89 87 85 84 90 79 83 85 86 88 84 81 88 85 83 83 86 82 83 86 82 84

Mia noticed that there were many different heart rates. She decided to make a *dot plot* to show the different heart rates.

Dot Plot of Heart Rate



a) What was the heart rate for the student with the lowest heart rate? _____

b) What was the heart rate for the student with the highest heart rate? _____

c) How many students had a heart rate greater than 86? _____

d) What fraction of the students had a heart rate less than 82? _____

e) What is the most common heart rate? _____

f) What heart rate describes the center of the data? _____

g) What heart rates are the most unusual heart rates? _____

h) If Mia's teacher asked what the typical heart rate is for 6th graders in the class, what would you tell Mia's teacher?

i) On the dot plot add a dot for Mia's heart rate.

j) How does Mia's heart rate compare with the heart rates of the other students in the class?

6. Last night, Jennifer and her family went out for dinner. The questions below came up on their way to the restaurant or during the meal. Decide whether or not each question is a statistical question, and justify your decision.

a) How far are we from the restaurant?

b) Would Jennifer rather have burgers or pizza?

c) How much should we leave for the tip?

d) What was the most frequently ordered dish in the restaurant this evening?

e) Which table's bill was the highest?

f) Do customers at the restaurant like pizza?

7. Listed are four statistical questions and four different dot plots of data collected to answer these questions. Match each statistical question with the appropriate dot plot. **Explain each of your choices.**

Statistical Question:

a) What are the ages of 4th graders in our school? _____

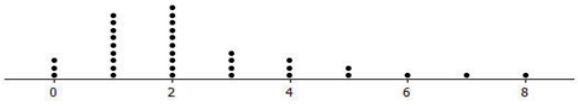
b) What are the heights of the players on the 8th grade boys' basketball team? _____

c) How many hours do 6th graders in our class watch TV on a school night? _____

d) How many different languages do students in our class speak? _____

Dot plot A

Dot plot B



Dot plot C

Dot plot D