Name: Modeling Data | 8.8

Ready, Set, Go!

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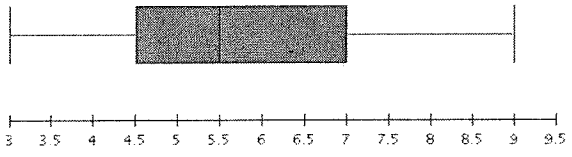
Ready

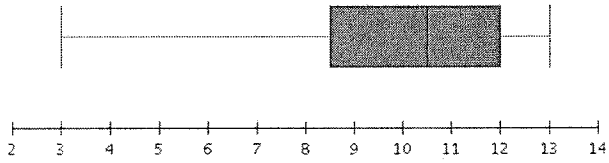
Topic: Describe the spread of the data.

Given the box-and-whisker plots describe the spread of the data set. Provide specifics about the median, range, interquartile range and so forth.

1.

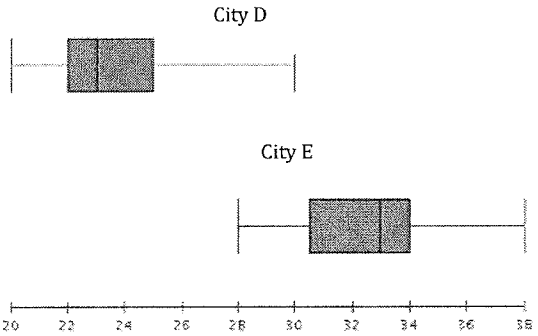


2.



3. If the box-and-whisker plots above represent the results of two different classes on the same assessment, which class did better? Why?

4. The two box-and-whisker plots below show the low temperatures for two cities in the United States.



a. Which city would be considered the coldest City D or City E? Why?

b. Do these cities ever experience the same temperature? How do you know?

c. Is there any way to know the exact temperature for any given day from the box and whisker plots?

d. What advantage if any could a scatter plot of temperature data have over a box and whisker plot?

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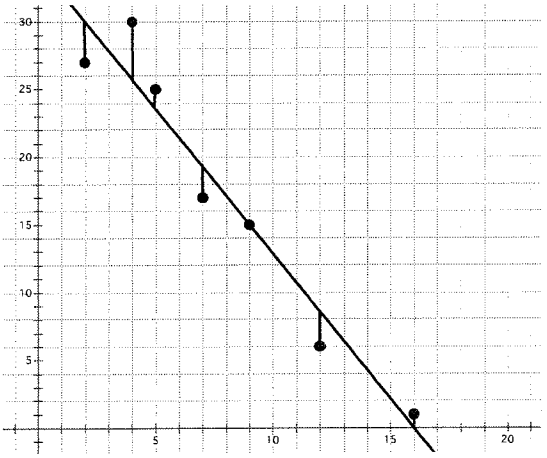
Set

Topic: Residuals, residual plots and correlation coefficients.

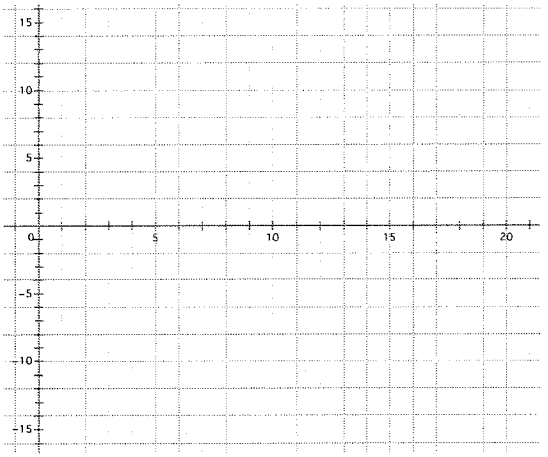
The Data Sheets below are scatter plots that have the regression line and the residuals indicated.

5a. Mark on the graph where $(\overline{x}, \overline{y})$ would be located.
b. Use this given plot to create a residual plot.
c. What would you predict the correlation coefficient to be?

Data Sheet 1

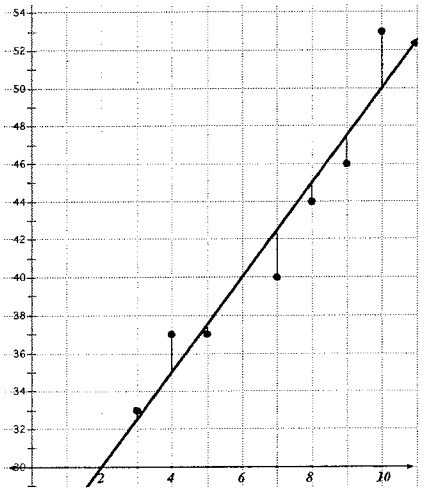


Residual Plot 1

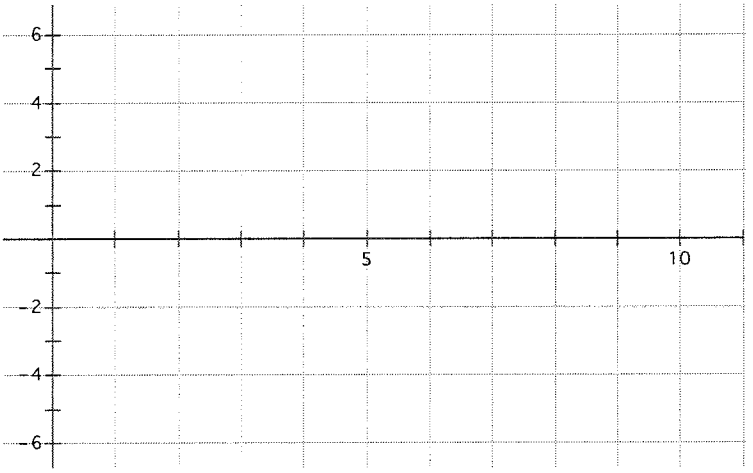


6a. Mark on the graph where $(\overline{x}, \overline{y})$ would be located.
b. Use this given plot to create a residual plot.
c. What would you predict the correlation coefficient to be?

Data Sheet 2



Residual Plot 2



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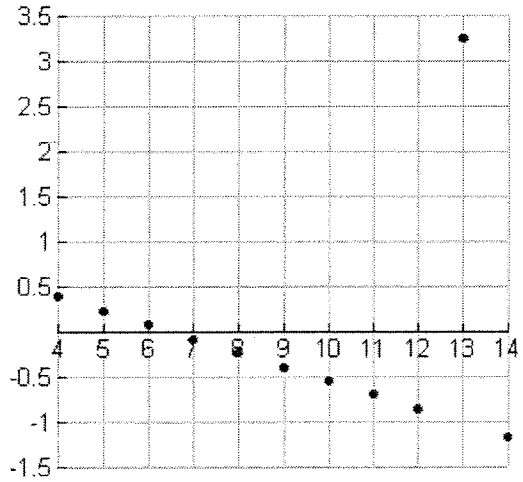
The following graphs are residual plots. Analyze the residual plots to determin how well the prediction line (line of best fit) describes the data.

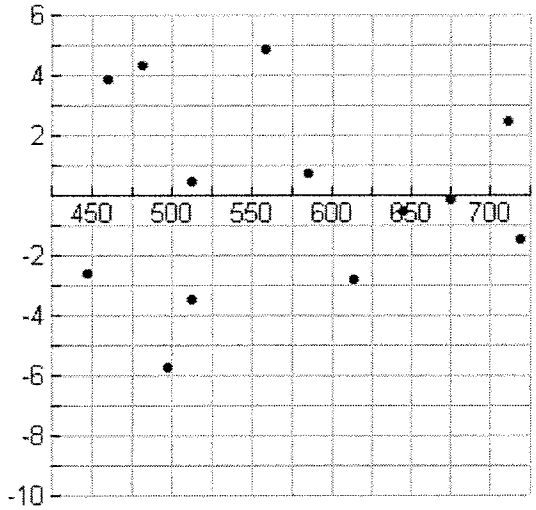
7. Plot 1

Analysis



8. Plot 2

Analysis



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Go
Topic: Geometric constructions.

9. Construct an isosceles triangle with a compass and straight edge.

10. Construct a square using compass and straight edge..

11. Use a compass and straight edge to construct a hexagon inscribed in a circle.