

9.8 Line Plots and Distribution Features

Chapter 9: Statistics and Data Analysis

Name: _____

Date: _____

Class/Period: _____

Problem 9.113 A line plot has eight values from 4 through 6 and no values from 7 through 10. Identify the cluster and the gap, then explain each term using the plot.

Problem 9.116 Values 6, 7, and 8 have frequencies 1, 3, and 2. Write the ordered data set and identify its mode.

Problem 9.114 A single value appears at 18 while all other values lie from 5 to 9. Explain why 18 is a possible outlier rather than automatically a proven outlier.

Problem 9.117 A plot contains data only from 4 to 9. What is the greatest possible range, and which two plotted positions determine it?

Problem 9.115 A plot has stack heights 2, 5, 4, and 1. Find the sample size and describe which stack forms the peak.

Problem 9.118 Draw a line plot with a cluster from 5 to 7 and a gap at 8. Include at least ten observations.

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Problem 9.119 Draw a line plot with two separate clusters. Write one sentence comparing their locations.

Problem 9.122 Add one extreme point to a small line plot. Describe which of range, median, and mode must or may change.

Problem 9.120 Give an example of a distribution with a gap but no clear outlier. Explain why the endpoint is still part of a cluster.

Problem 9.123 A line plot has values 1 through 5 with frequencies 1, 2, 3, 4, and 5. Find mean, median, mode, and range without rewriting every observation unless needed.

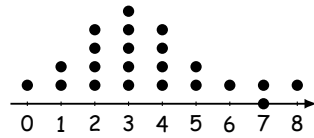
Problem 9.121 Give an example of a possible outlier without an internal one-unit gap. Explain what makes the value unusual.

Problem 9.124 Explain why a line plot allows the exact mean to be calculated while a histogram may allow only an estimate.

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Problem 9.125 Study the plot.



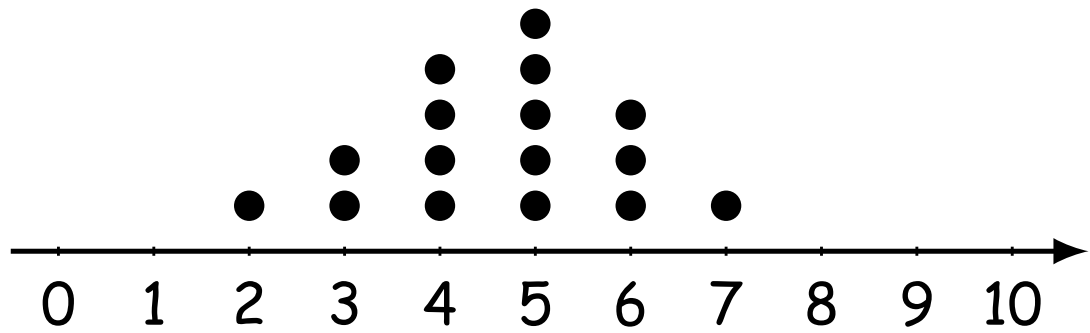
Count the observations, locate the main cluster, identify the gap, and write one complete sentence describing the distribution.

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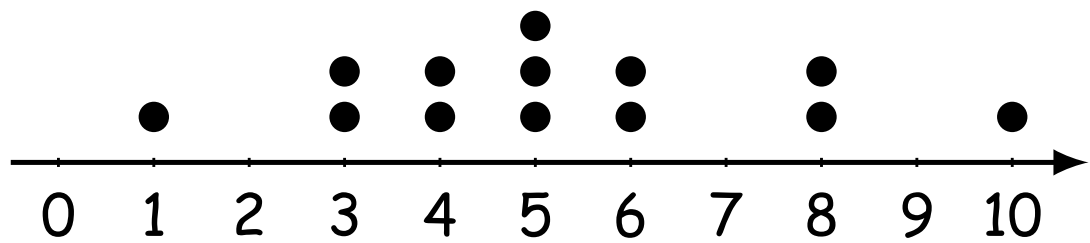
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Problem 9.126 Compare the classes.

Class A



Class B



Which class has a clearer cluster? Which has the larger range? A student says Class B is better because it has the highest point. Explain why that conclusion is unsupported.

Problem 9.127 Construct a 20-point line plot with mean 5, one cluster, one gap, and one possible outlier. Label each requested feature.

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Problem 9.128 Construct two different line plots with the same mean, median, mode, and range but different clusters. Explain what the summary statistics fail to record.