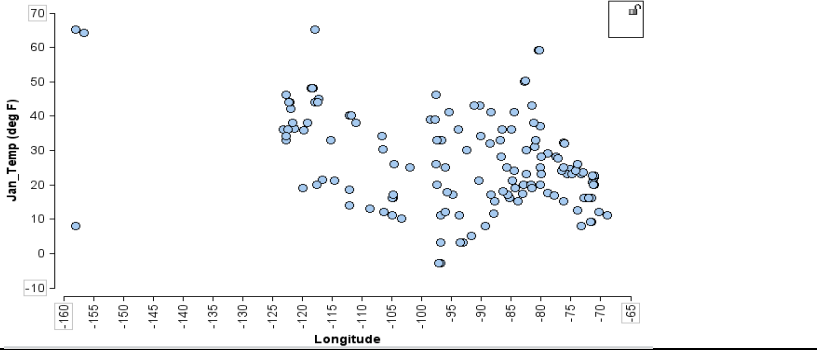
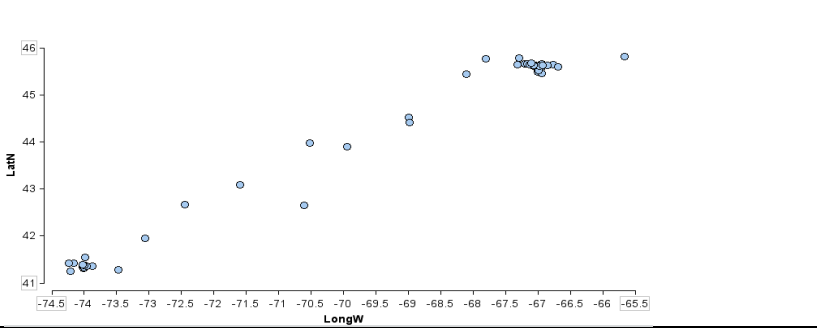
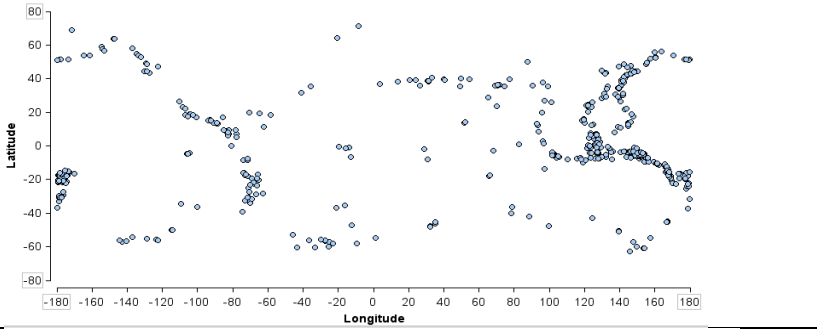
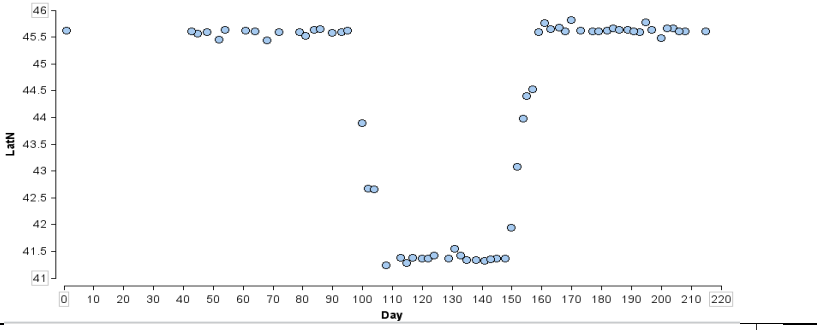
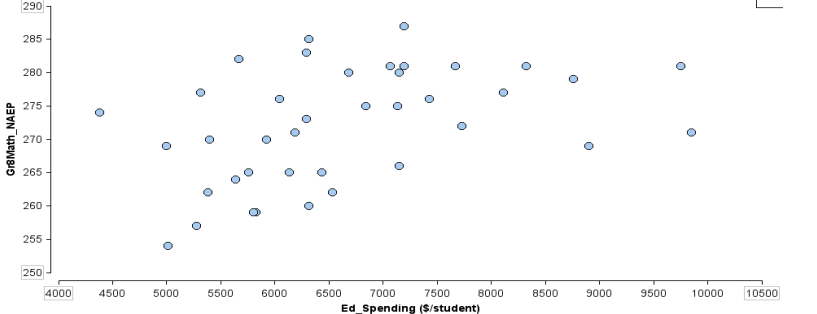


Activity: Functions and Data Analysis

Match the scatterplot and data descriptions. One data description goes with 2 plots.

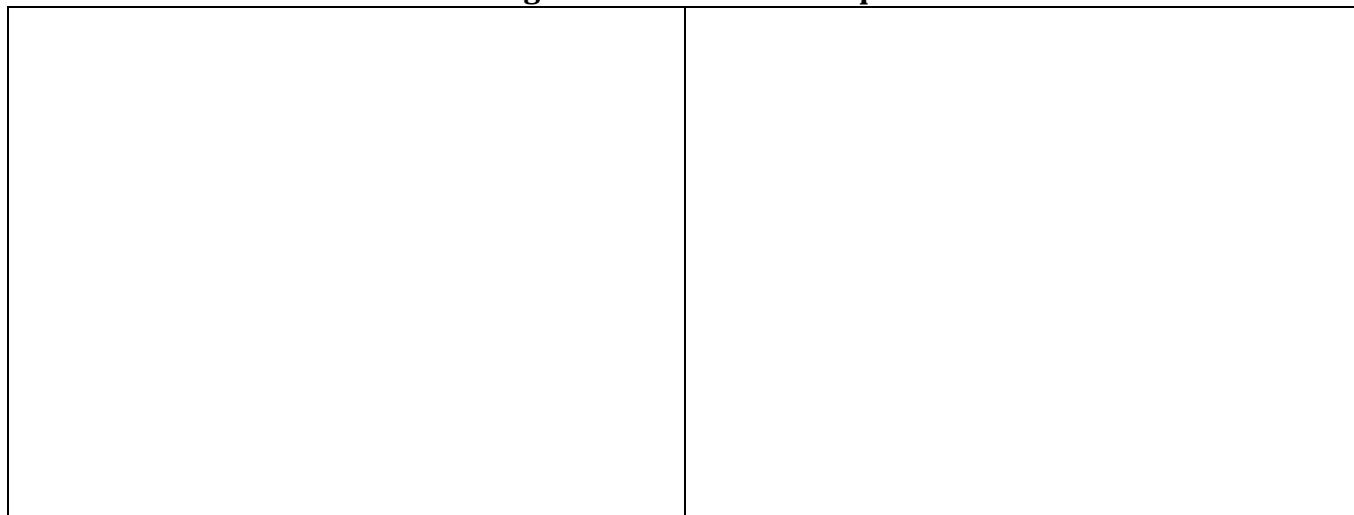
 <p>A scatterplot showing the relationship between longitude and January temperature in degrees Fahrenheit for U.S. states. The x-axis is labeled 'Longitude' and ranges from -160 to -65. The y-axis is labeled 'Jan_Temp (deg F)' and ranges from -10 to 70. The data points show a clear negative correlation, with higher temperatures in the east and lower temperatures in the west.</p>	<p>These data show scores on the math section of the 8th grade NAEP test in 2000 and dollars spent per student in public elementary and secondary schools in 1999-2000 for U.S. states.</p> <p style="text-align: center;">Questions:</p>
 <p>A scatterplot showing the relationship between longitude and January temperature in degrees Fahrenheit for 146 U.S. cities. The x-axis is labeled 'LongW' and ranges from -74.5 to -65.5. The y-axis is labeled 'LATN' and ranges from 41 to 46. The data points show a positive correlation, with higher latitudes in the west and lower latitudes in the east.</p>	<p>These data show the average daily high temperature in January (in °F) for 146 U.S. cities</p> <p style="text-align: center;">Questions:</p>
 <p>A scatterplot showing the physical location of a female bald eagle as she flew from her summer nesting grounds to a new winter location and back. The x-axis is labeled 'Longitude' and ranges from -180 to 180. The y-axis is labeled 'Latitude' and ranges from -80 to 80. The data points form a large, irregular loop across the globe, representing the eagle's migration path.</p>	<p>These data show the physical location of a female bald eagle as she flew from her summer nesting grounds to a new winter location and back.</p> <p style="text-align: center;">Questions:</p>
 <p>A scatterplot showing the location of earthquakes of magnitude 6 or greater from 2000 through 2003. The x-axis is labeled 'Day' and ranges from 0 to 220. The y-axis is labeled 'LATN' and ranges from 41 to 46. The data points are clustered in two main horizontal bands, one around latitude 45.5 and another around latitude 41.5.</p>	<p>These data show the location of earthquakes of magnitude 6 or greater from 2000 through 2003.</p> <p style="text-align: center;">Questions:</p>
 <p>A scatterplot showing the relationship between Celsius NAEP scores and dollars spent per student. The x-axis is labeled 'Ed_Spending (\$/student)' and ranges from 4000 to 10500. The y-axis is labeled 'Celsius NAEP' and ranges from 250 to 290. The data points show a positive correlation, with higher spending generally associated with higher NAEP scores.</p>	<p style="text-align: center;">Questions:</p>

**Beyond Input-Output Machines:
Understanding Functions Through Multiple Representations**

Christy Pettis & Aran Glancy
University of Minnesota

Christopher Danielson
Normandale Community College

Venn Diagram: Functions and Equations



Formal definition of function

A large empty rectangular box for the formal definition of a function.

Notes

A large empty rectangular box for notes.

