



In Class Exercises (ICE) - 7/25/00

Since the late 1950's, a string of reports have described large, hairy, ape-like creatures (named "Bigfoot") inhabiting the forests of the Pacific northwest. For the last forty years, Bigfoot researchers have made plaster casts of large footprints that have been discovered in wilderness areas of the Pacific northwest.

Two of the measurements that Bigfoot researchers have focused on are the length of the foot and the foot width index (this is the width of the foot divided by the length of the foot). The lengths and foot width indices for a large number of plaster casts are shown in Figure 1 below.

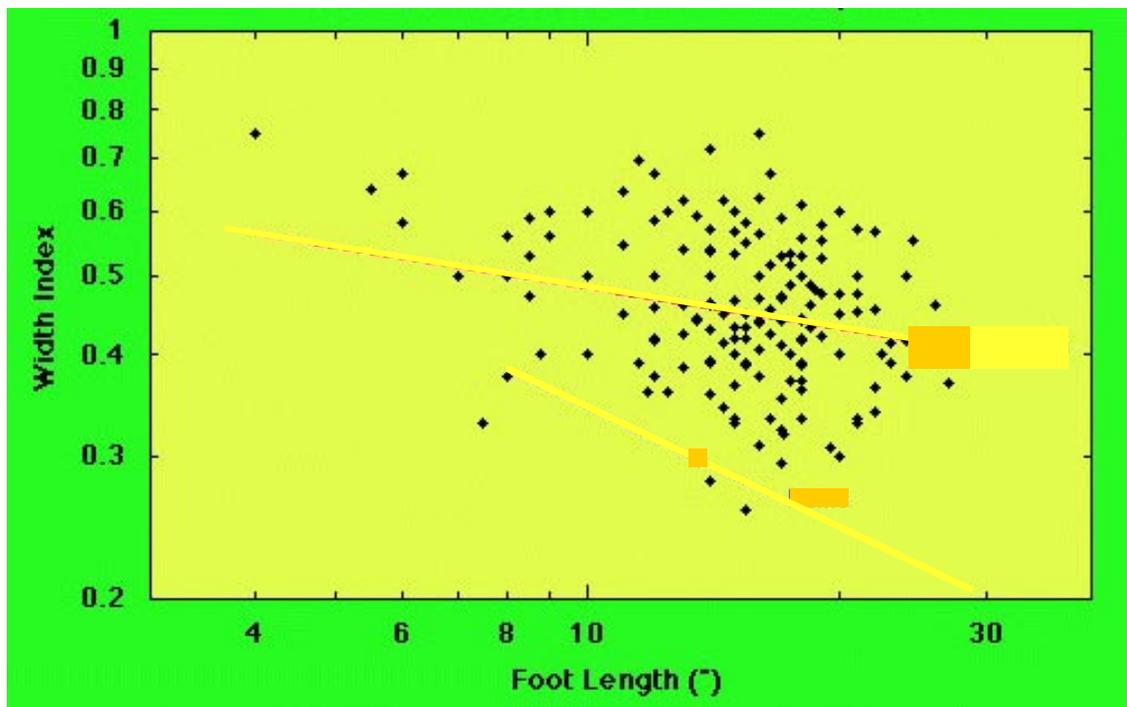


Figure 1: Foot Width Index versus Foot Length for Plaster Casts.

- *From the plot in Figure 1, what are the two quantities involved? Which appears to be the dependent variable, and which seems to be the independent variable?*
- *Predict the width index for a foot print that measured 18 inches in length.*
- *What problems did you have in predicting the width index?*



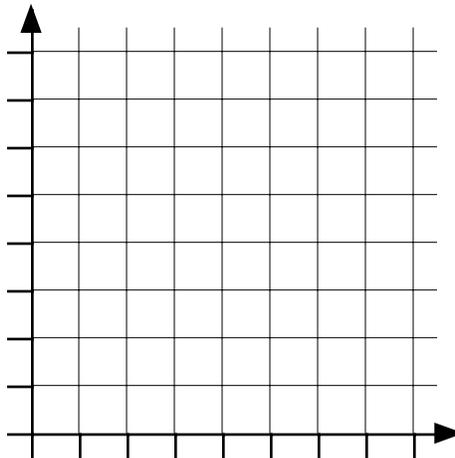
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Measurements of the human body are of interest to a lot of people, for example, designers of athletic equipment, clothing and shoe manufacturers. In this activity, you will investigate how some body measurements are related to each other.

- ***Measure the distance around your neck and the distance around your wrist in inches. Record the measurements in the table provided below. Share your measurements with other students in the class so that you have enough data to fill up the table.***

Student	Neck measurement	Wrist measurement

- ***Use the axes provided below to make a graphical representation of your data.***



- *Find out the wrist measurement of your instructor. Use your plot to predict your instructor's neck measurement. Is your prediction accurate? How could you test the accuracy your prediction?*

- *Which of the two predictions (the Bigfoot prediction or the neck size prediction) do you have the most confidence in? Why?*

- *What is the relevance of the concept: "function" to making predictions?*