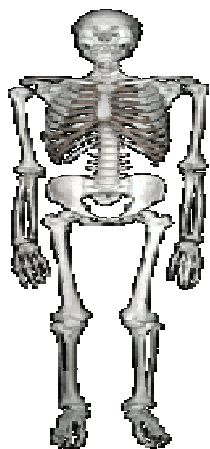


"Dem Bones"



Algebra Activity: "*Sam or Samantha?*"

Materials Needed:

Activity Worksheet

Metric Measuring Devices

Skeleton

TI-83 Calculator

1. Bring the Skeleton to the class and have a short discussion of anthropology with the students. Explain how the human body is proportioned, i.e. *Golden Ratio*. Tell the students we are going to discover the relationship between the humerus and height.
2. Divide students into small groups and have each student measure their humerus and height. Be sure to measure in centimeters. Divide data into 2 groups, male and female.



3. Students put the data onto the chart

4. Transfer the data into the graphing calculator
5. Entering the Lists into the TI-83:
 - a. Turn on the Calculator
 - b. Choose Stat Key
 - c. Choose ClrLst , press enter
 - d. Choose L1, L2, L3,L4
 - e. Press Enter Key
 - f. Press Stat Key
 - g. Choose Edit and press enter
 - h. Under List 1, type in the length of each male humerus
 - i. Under List 2, type in the height of each male
 - j. Under List 3, type in the length of each female humerus
 - k. Under List 4, type in the height of each female
6. Press Stat Plot and Choose #4, Turn Stat Plot Off
7. Press Stat Plot and Choose #1
8. Press Enter
9. Set up to use Scatter Plot for List 1 and List 2
10. Do the same for Plot 2 using List 3 and List 4
11. Graph each one, one at a time.
12. Press the Zoom Stat if it is not showing on the screen
13. Under Stat, Calc, do LinReg for each
14. As a class we measure the humerus and height of the skeleton
15. Using the Table and the "skeleton" information predict if it is a "Sam or Samantha?"
16. Extension: Students predict other students heights in the school given the length of their humerus.