

Alg Stats 2.4

Head Hunters

Is your head circumference related to your height?

- Collect materials. Graph paper, short string centimeter measuring tool.
- Measure your height and head (at the center of your forehead).
- Record the data. Find the ratio of height/head circumference.
- Plot the points on graph paper. Head is on the x axis. Height is on the y axis.
- Use your string to create a line of best fit. Draw the line on the graph.
- Answer the questions below.

Student Name	Head (cm)	Height (cm)	Ratio Height/head	Dec. Ratio	Student Name	Head (cm)	Height (cm)	Ratio Height/head	Dec. Ratio
1					19				
2					20				
3					21				
4					22				
5					23				
6					24				
7					25				
8					26				
9					27				
10					28				
11					29				
12					30				
13					31				
14					32				
15					33				
16					34				
17					35				
18					36				
					Average				

- 1) Is there a correlation between head circumference and height? How would you describe it?

- 2) Pretend there is a giant in the school. His head is 100 centimeters around. How tall would you expect him to be? Use your line of best fit to help your prediction.

- 3) Now there is a very small person running around. She is only 150 centimeters tall. What do you think her head circumference would be?

- 4) Find the slope of the line. Show your work below.

- 5) How is the slope related to the ratio and the decimal ratio? Look especially at the average ratio.

- 6) What are some other measurement relationships which might produce positive or negative correlations? Describe them below and note whether the relationships would have positive or negative correlations.