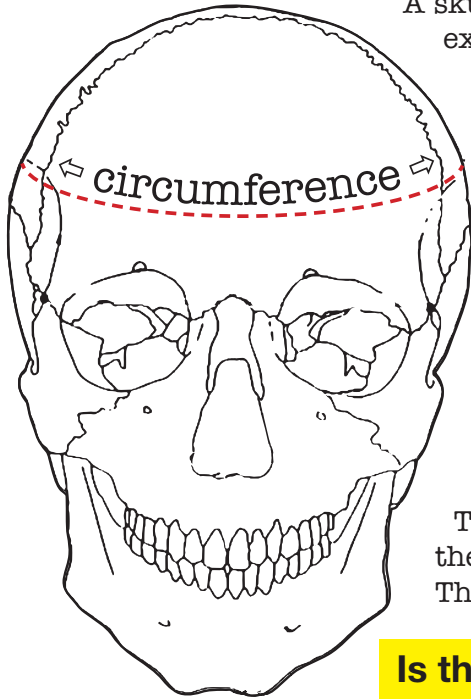


## BACKGROUND



A skull has been found by workers during excavation for foundations of a new shopping centre.

The police have been called to investigate.

The police need to gain as much information from the skull as possible. So they call in the C.S.I. team to conduct tests on the skull.

One piece of information that the police would like to know is: **What was the height of the person to whom the skull belongs?**

The C.S.I. team need as much data as they can for their forensic investigations. They would like to answer this question:

**Is there a relationship between the cranium circumference and height of a person?**

You are about to assist with investigating the answer to this question.

## ENTER YOUR MEASUREMENTS

Age:

Gender:

Cranium Circumference (cm):

Height (cm):

## METHOD

Measure your height and cranium circumference and enter those details onto this worksheet and the spreadsheet on the nearby computer

**If the computer area is busy please call back later to enter your results.**

You will see your result appear as a point on the scatter plot being projected on the screen.

Also on the graph you will see some other data that may be of assistance in the investigation. **Ask AMSI staff on the stand to explain how this information could be of use.**

During the next few days of the Science Festival we will gather as much information as possible to answer the question posed.

## THE MATHEMATICS INVOLVED

Once all the data has been collected and entered into the spreadsheet a **scatterplot** will be produced of the data.

From this **scatterplot** we may be able to see a **correlation between the variables**. The strength of the **correlation** can be found by calculating the **correlation coefficient**.

We can also produce a **regression line** for the data. And from this calculate the **equation** for the **regression line**.

From the **regression line equation**, we can make predictions regarding the **height** of a person from the **circumference** of their cranium.

**So is there a relationship between these variables?**

Please visit the AMSI web site to see the final results of this investigation

**AMSI.ORG.AU/CSIAMSI**

# CSIAMSI

## INVESTIGATION

To further explore the free resources on offer by the AMSI School's team please go to

[CALCULATE.ORG.AU](http://CALCULATE.ORG.AU)

