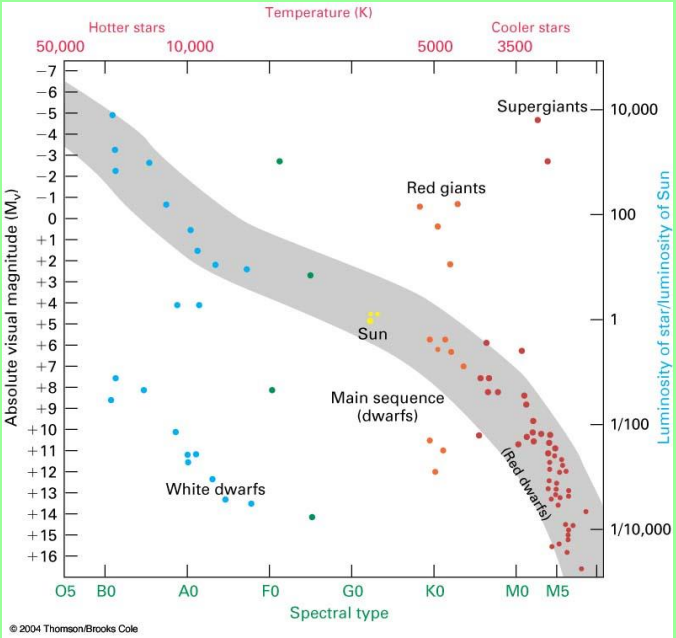
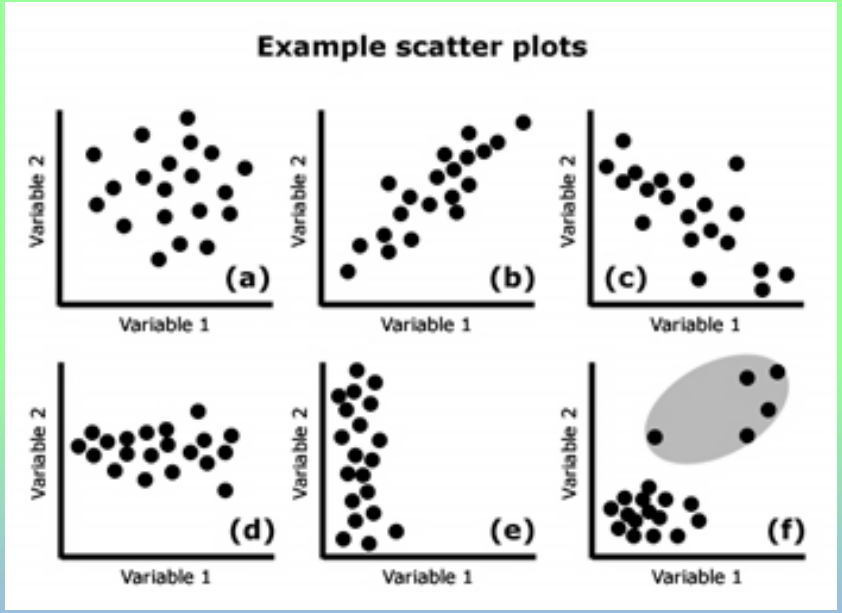
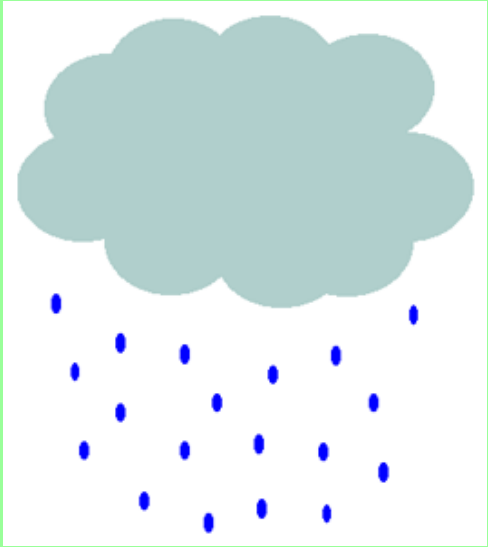



# Scatter Graphs



# Making Connections

- The more it rains...
- The hotter it is...
- The more you read...
- The older the child...

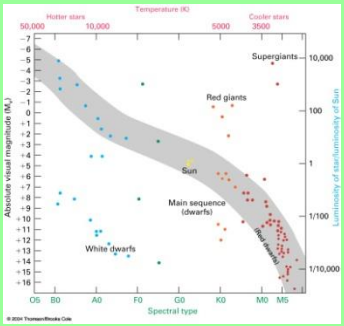


...the more words you learn

...the more people wear coats

...the taller they are

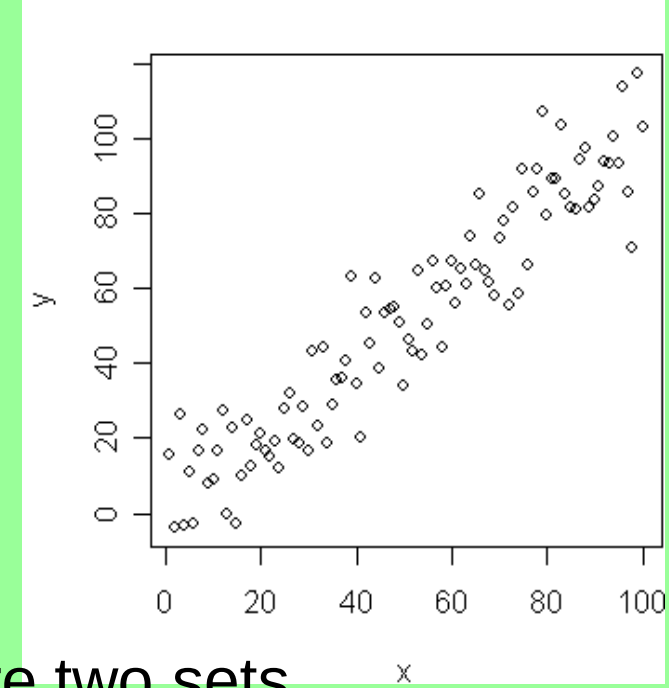
...the more people buy ice cream




# Scatter Graphs

- Today we will be looking at plotting Scatter Graphs
- Scatter Graphs are used to represent two linked pieces of data
- Once plotted, patterns can more easily be found and estimates can be made from it

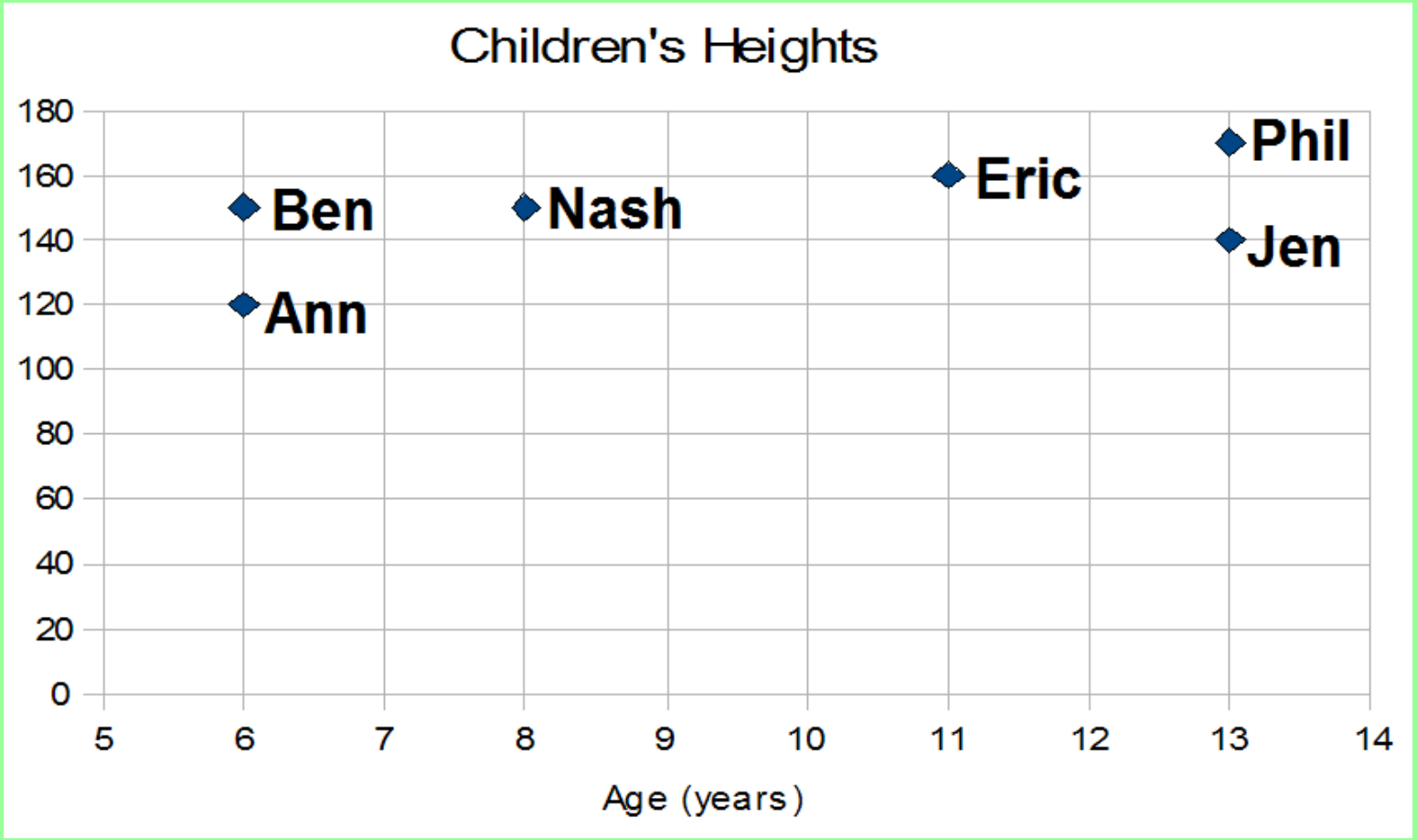
# What is a scatter graph?




Scatter graphs are used to compare two sets of data (e.g. age and height).

They can be used to look for a connection between the two sets of data.

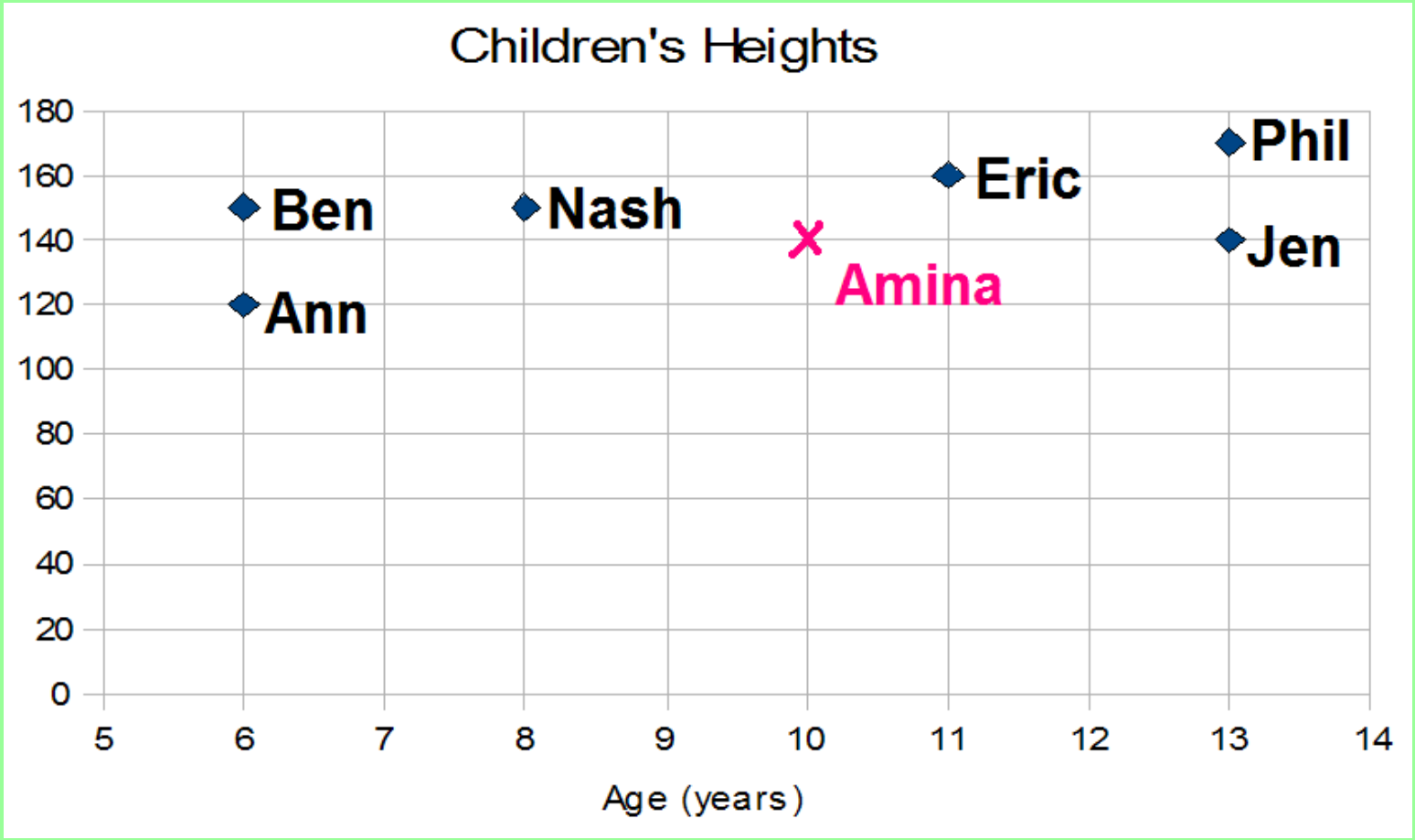
This connection is called a **correlation**.




- Who is the **tallest**?
- Who is the **youngest**?
- How much **taller** is Eric than Ann?
- How much **younger** is Nash than Jen?
- If Amina is 10 years old and 140cm tall, how would this be shown on the graph?

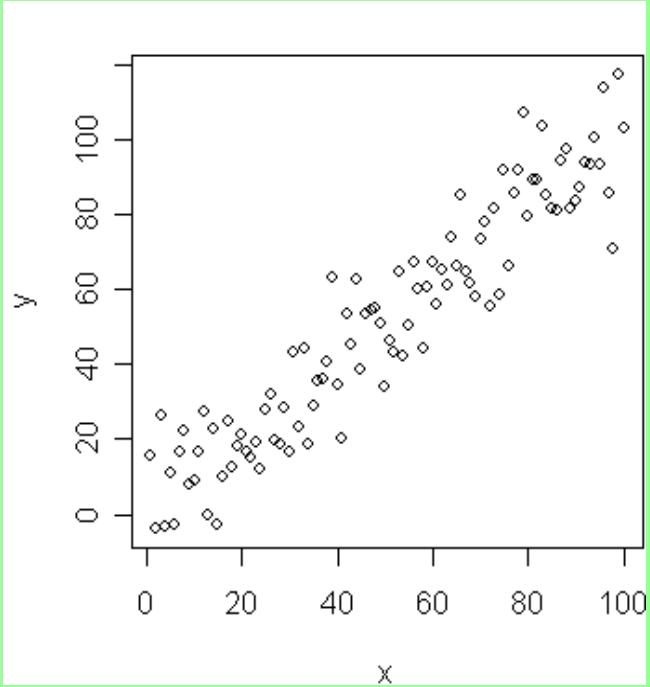
# Interpreting a scatter graph

28/07/10



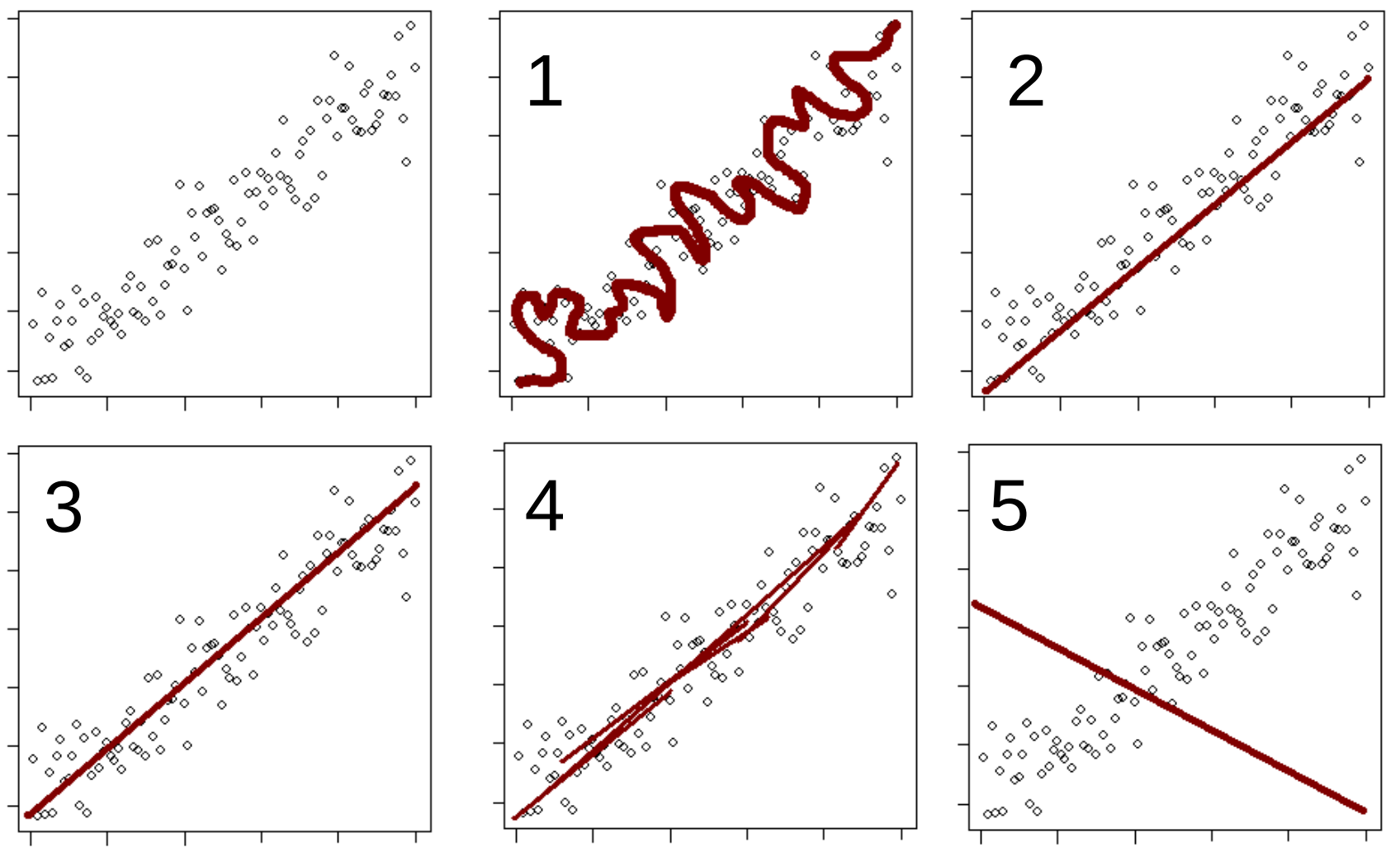

- Who is the **tallest**?
- Who is the **youngest**?
- How much **taller** is Eric than Ann?
- How much **younger** is Nash than Jen?
- If Amina is 10 years old and is 140cm tall, how would this be shown on the graph?

# The Line of Best Fit

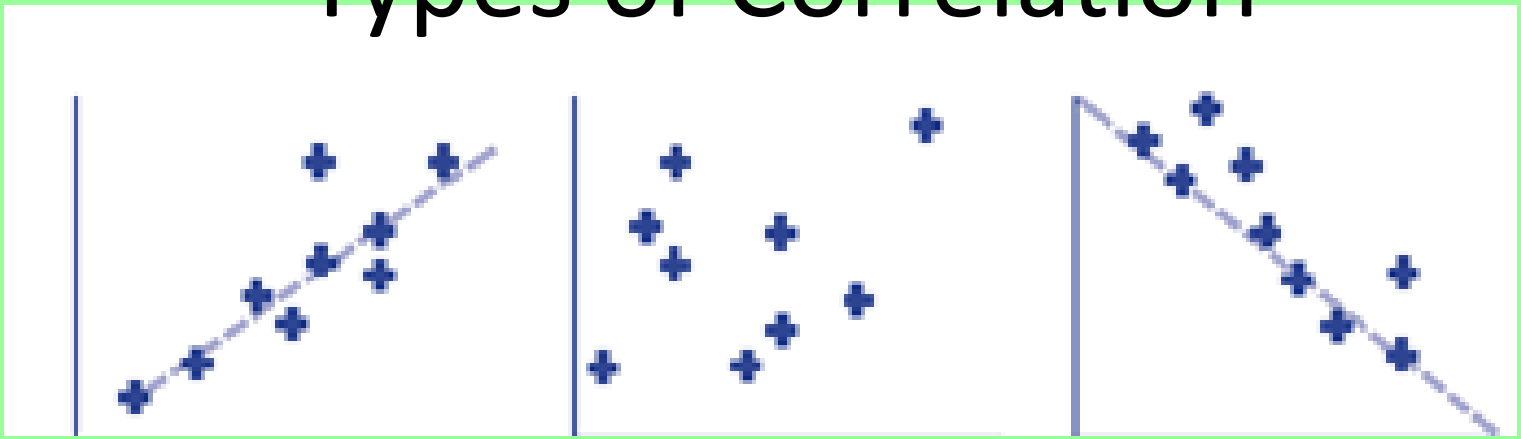



- When there is a connection between two sets of data, we can draw a **line of best fit**.
- The line of best fit shows the **general trend** of the data.
- You can draw the line wherever you think it fits best..
- ...but some lines are better than others!

# Line of Best Fit ?



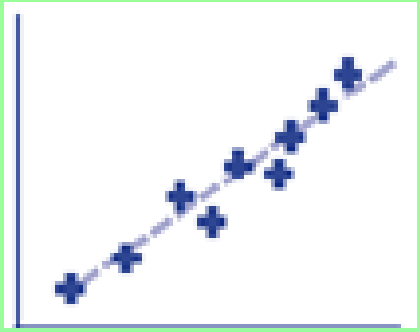
# Types of Correlation



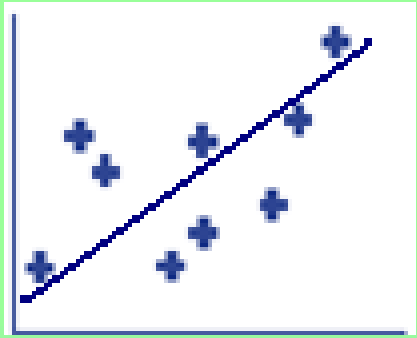
**Positive correlation**
Line of best fit slopes upwards.

**No correlation**
Cannot draw a line of best fit.

**Negative correlation**
Line of best fit slopes downwards.

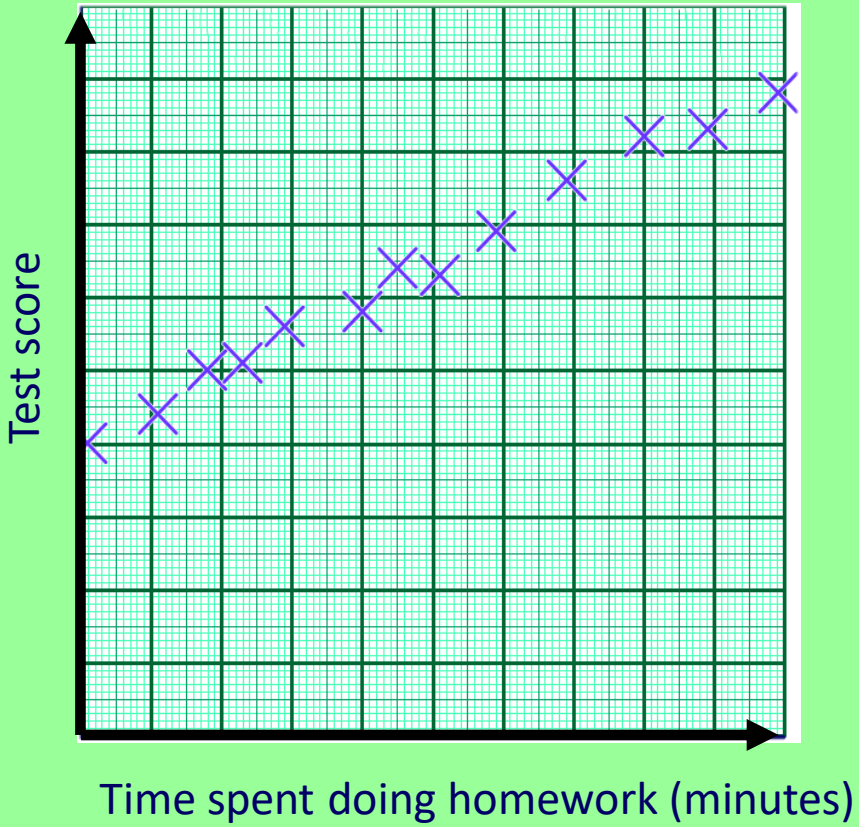


**Strong correlation**
Points lie close to the line of best fit

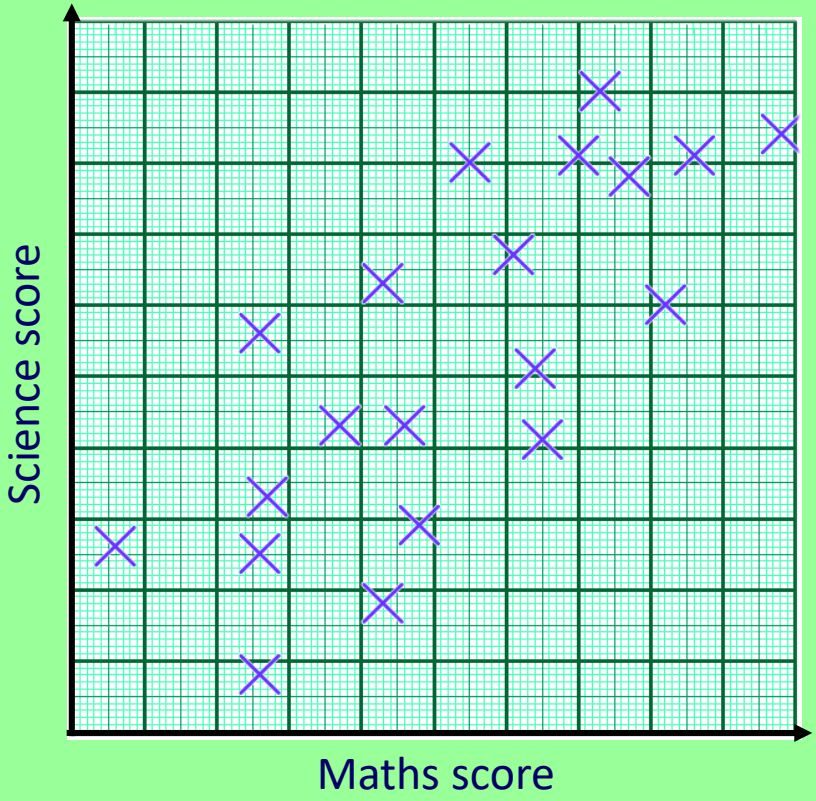


**Weak correlation**
Difficult to draw a line of best fit

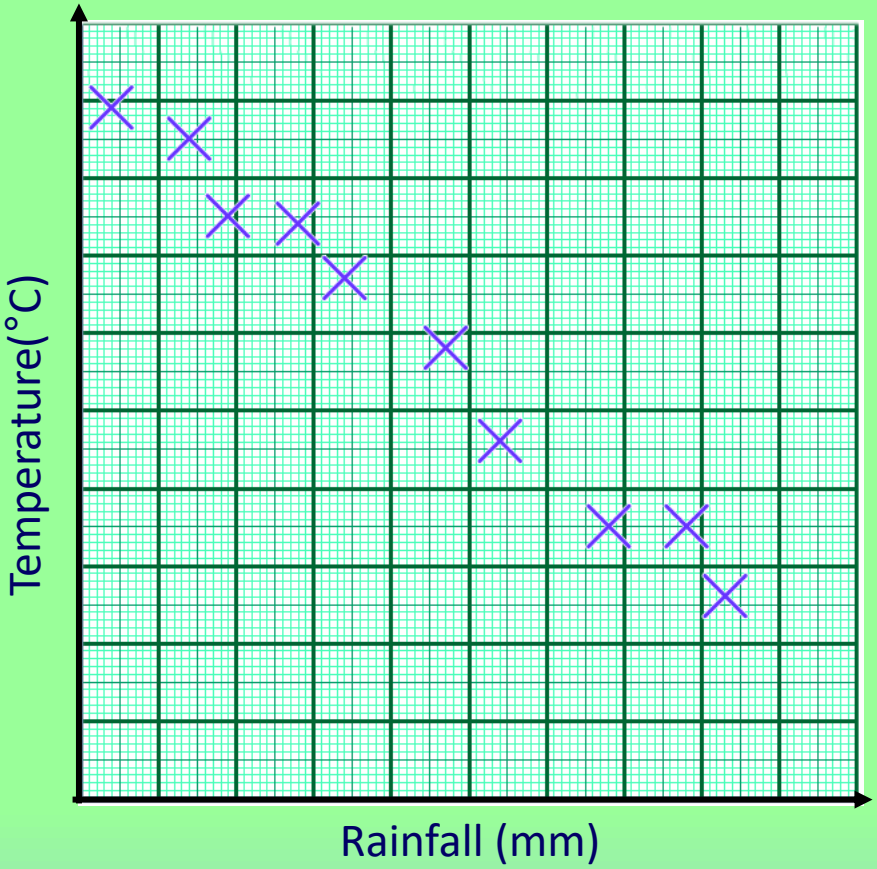
# Positive correlation



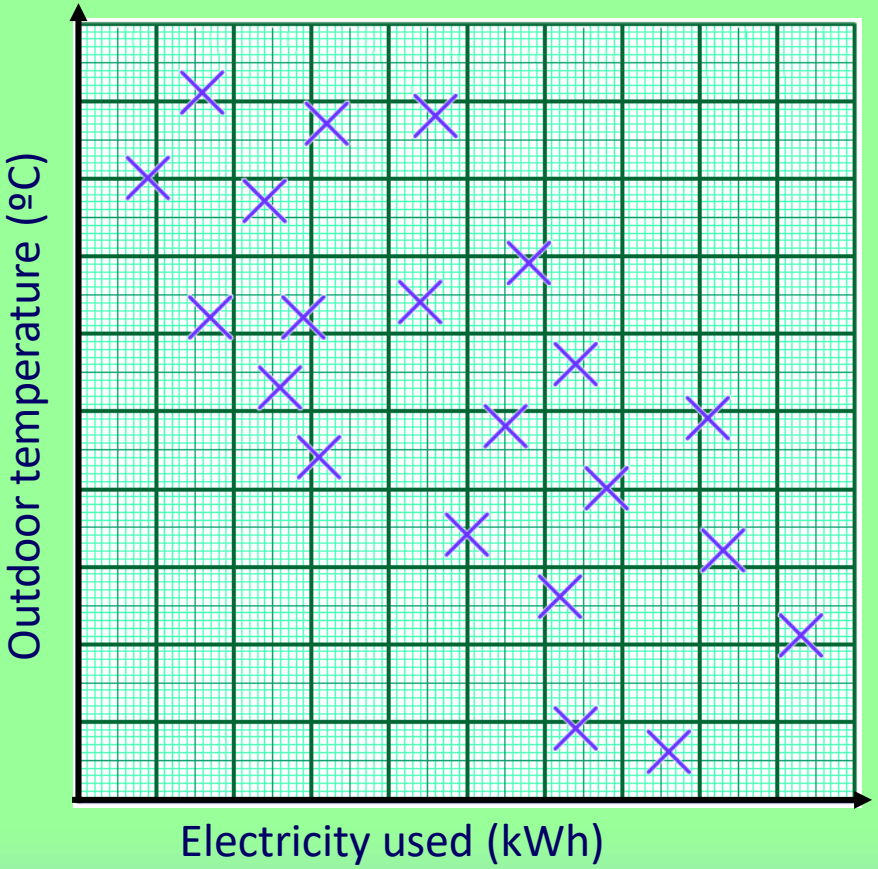

## weak positive correlation



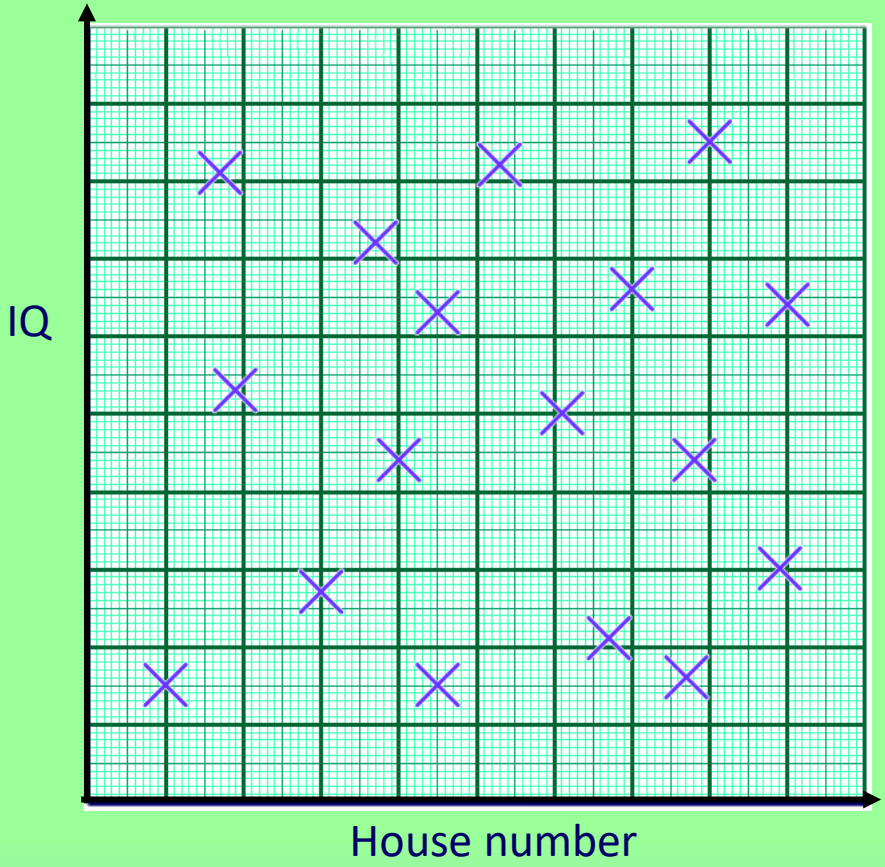
# Negative correlation




## weak negative correlation

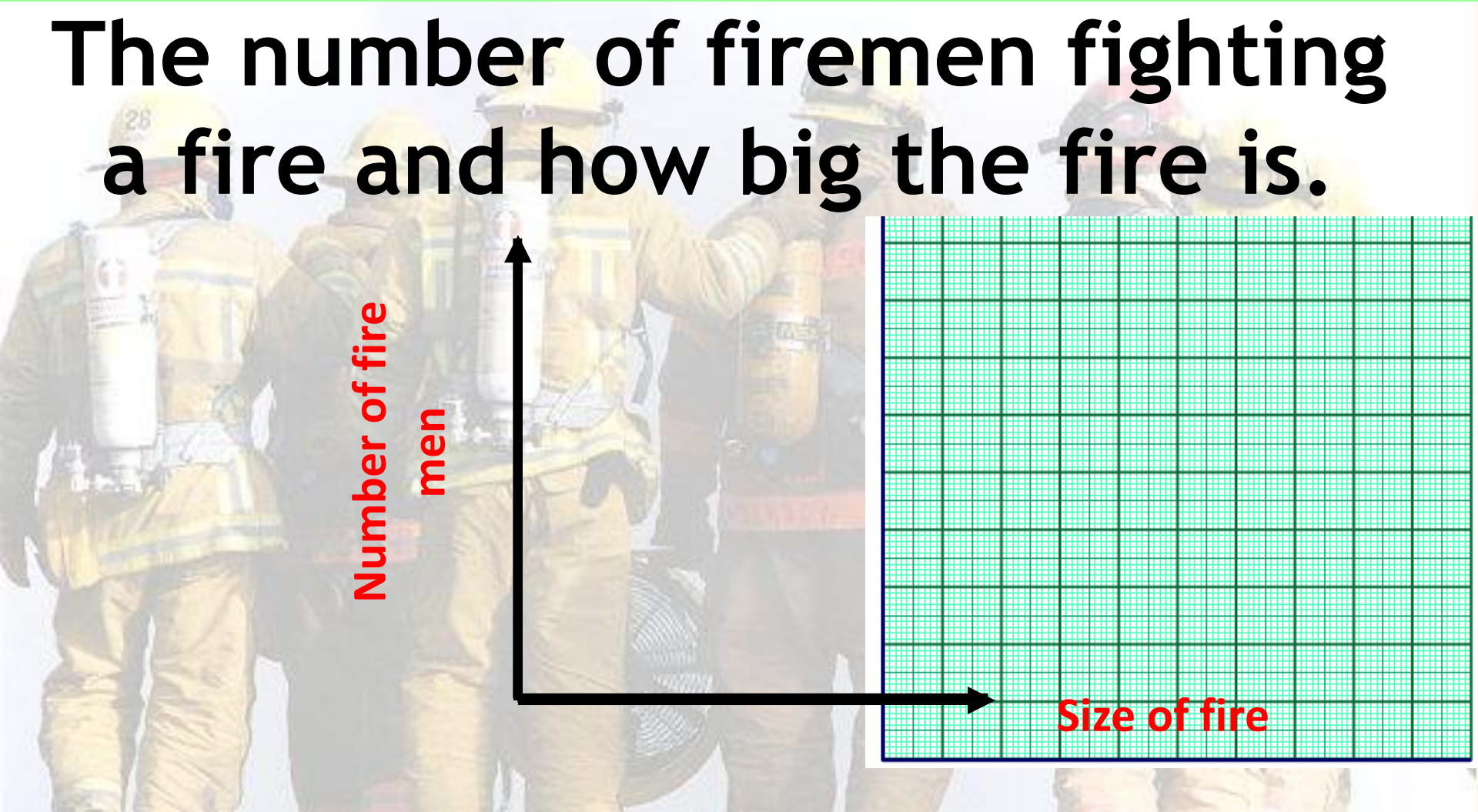


# No correlation



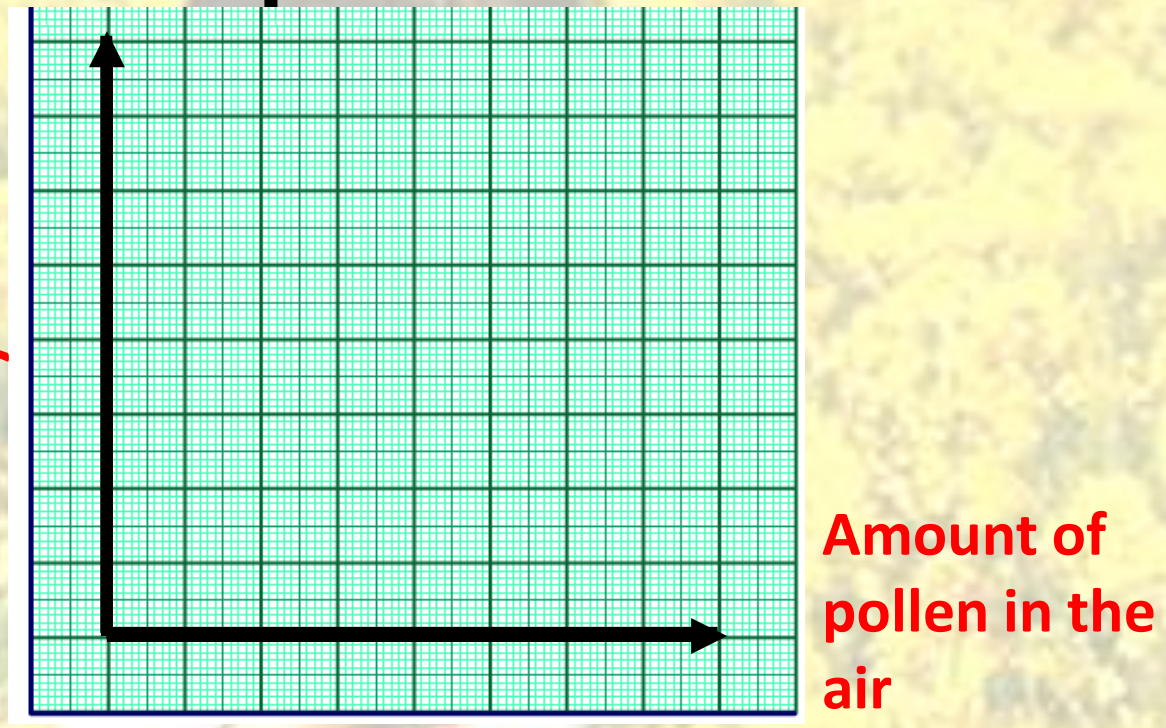
# What type of correlation would you expect?

**The number of firemen fighting a fire and how big the fire is.**



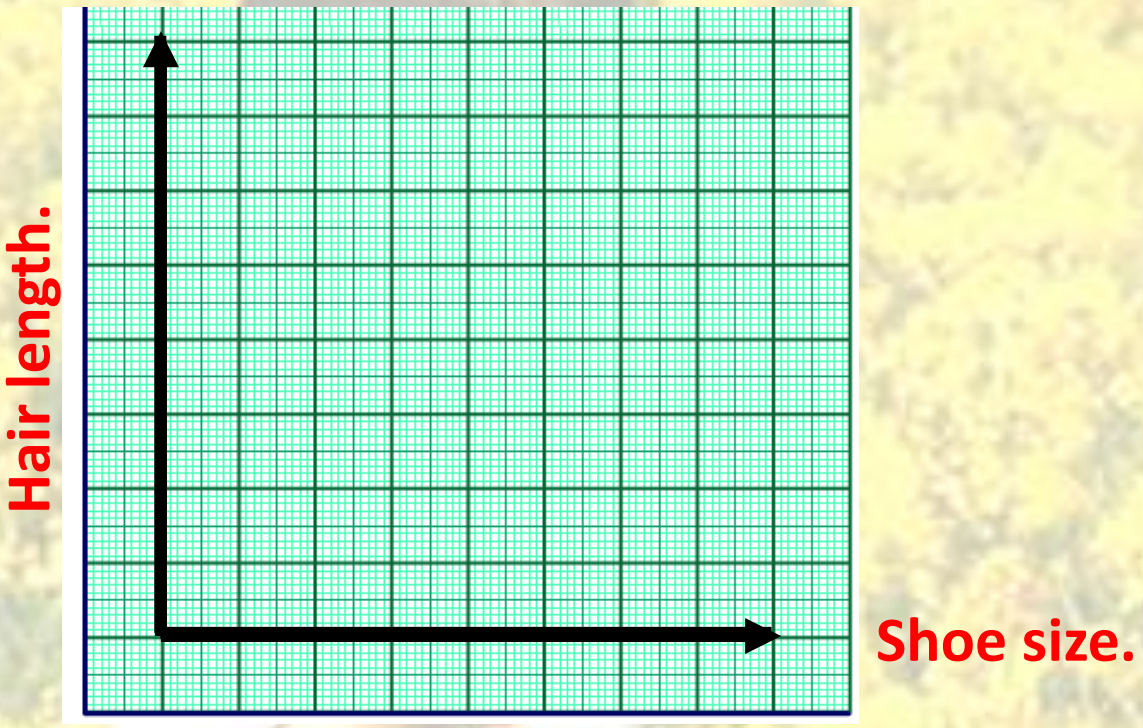
# What type of correlation would you expect?

**During summer, the number of people with hayfever and the amount of pollen in the air.**

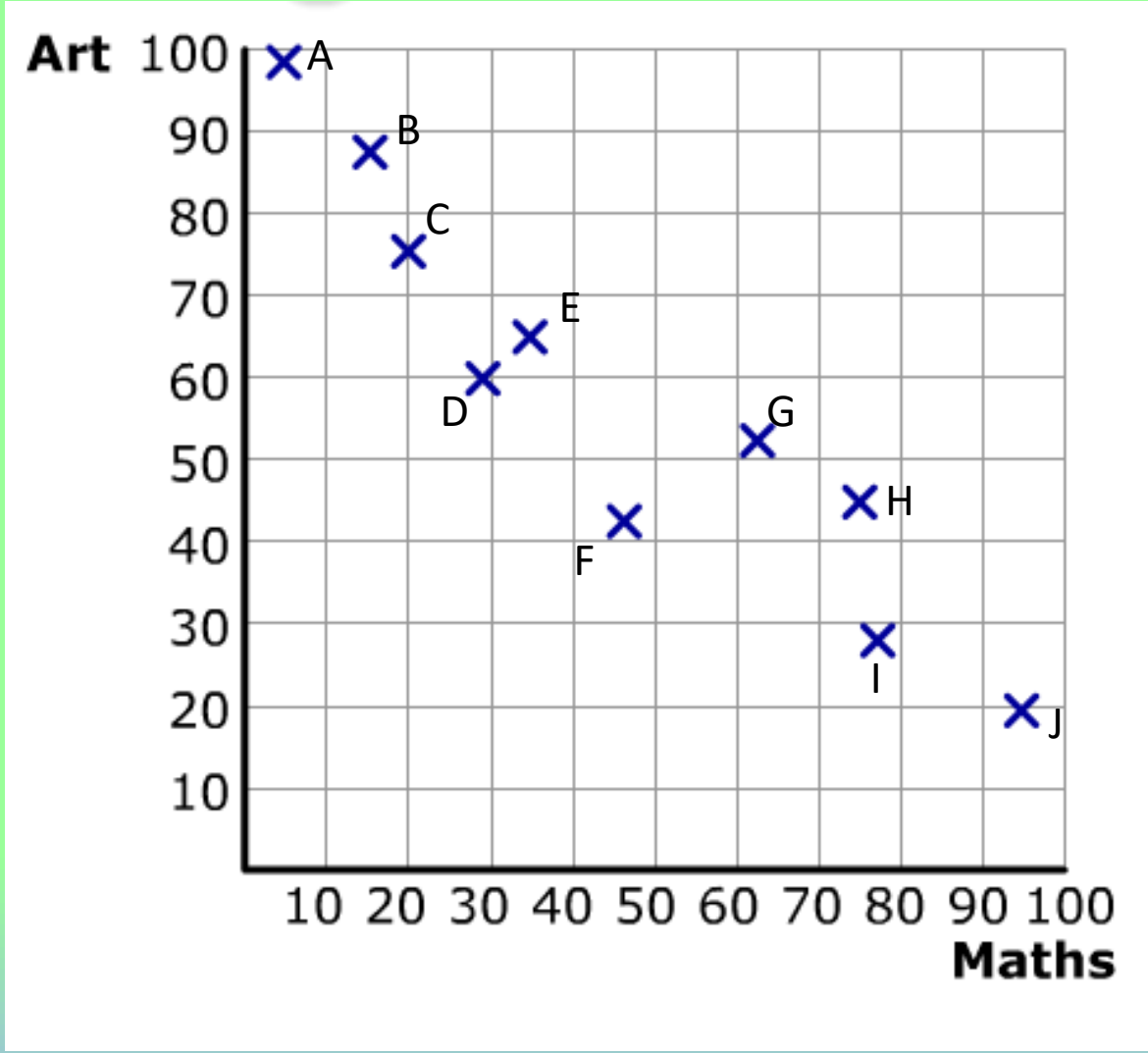


# What type of correlation would you expect?

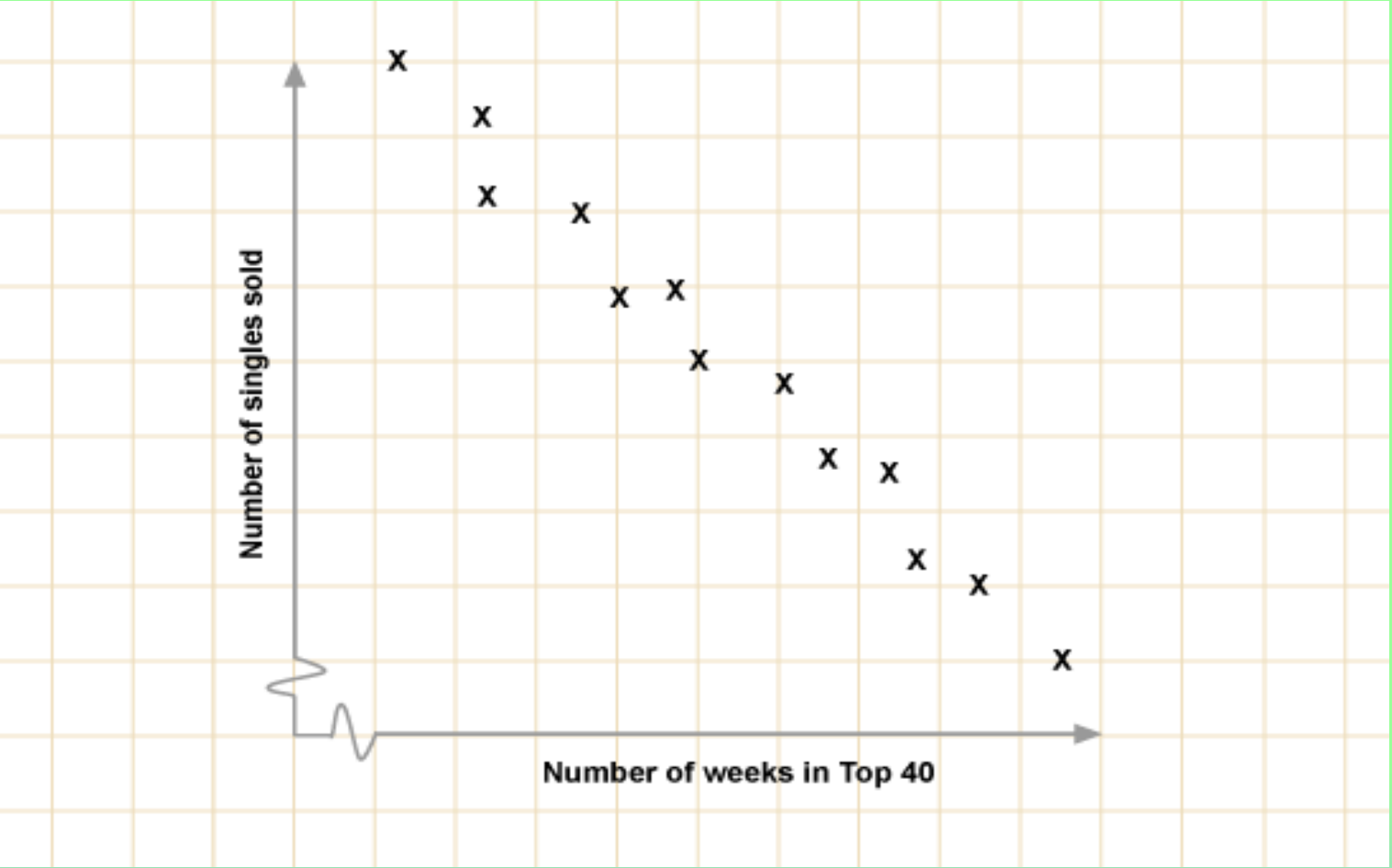
**The length of someone's hair and their shoe size.**



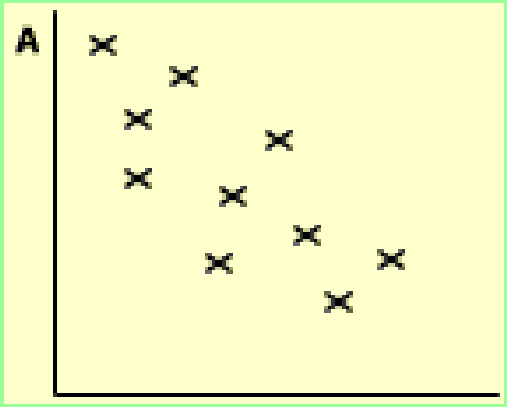
Amy scored 20 marks in maths and 75 mark in art. Which cross represents her scores?

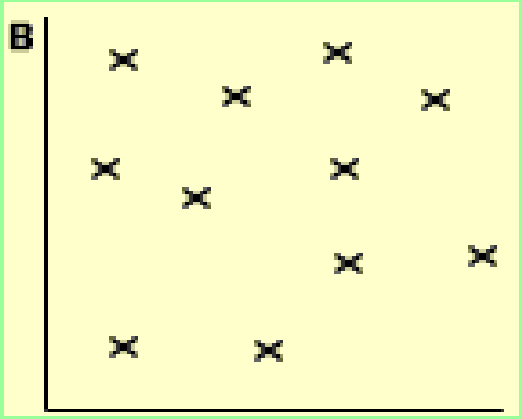


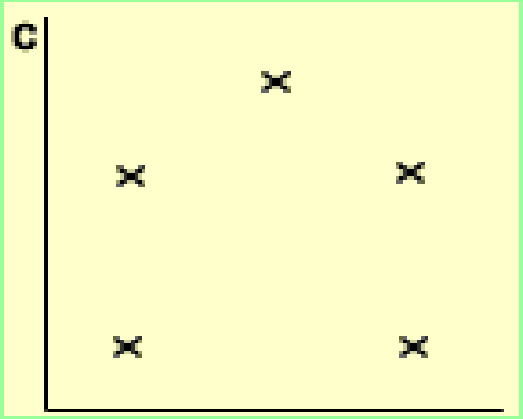
# What type of correlation does this scatter graph show?

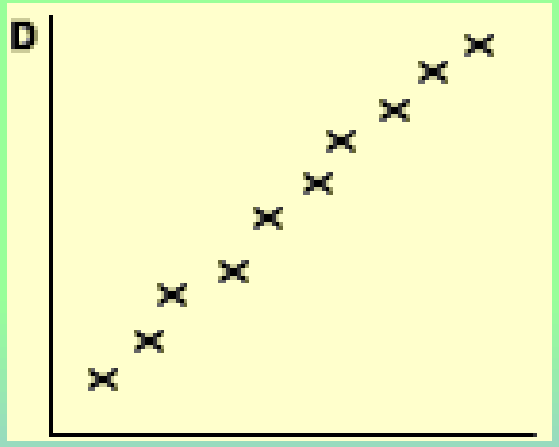


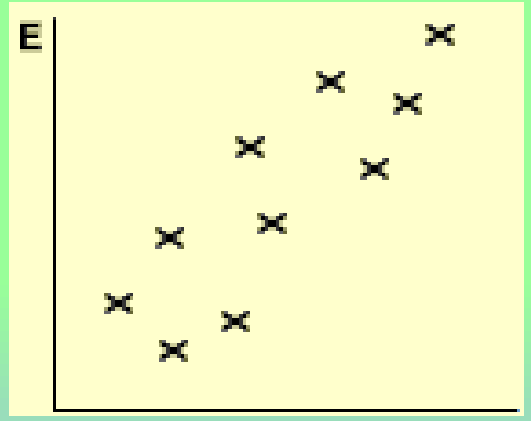
# Which diagram shows weak negative correlation?



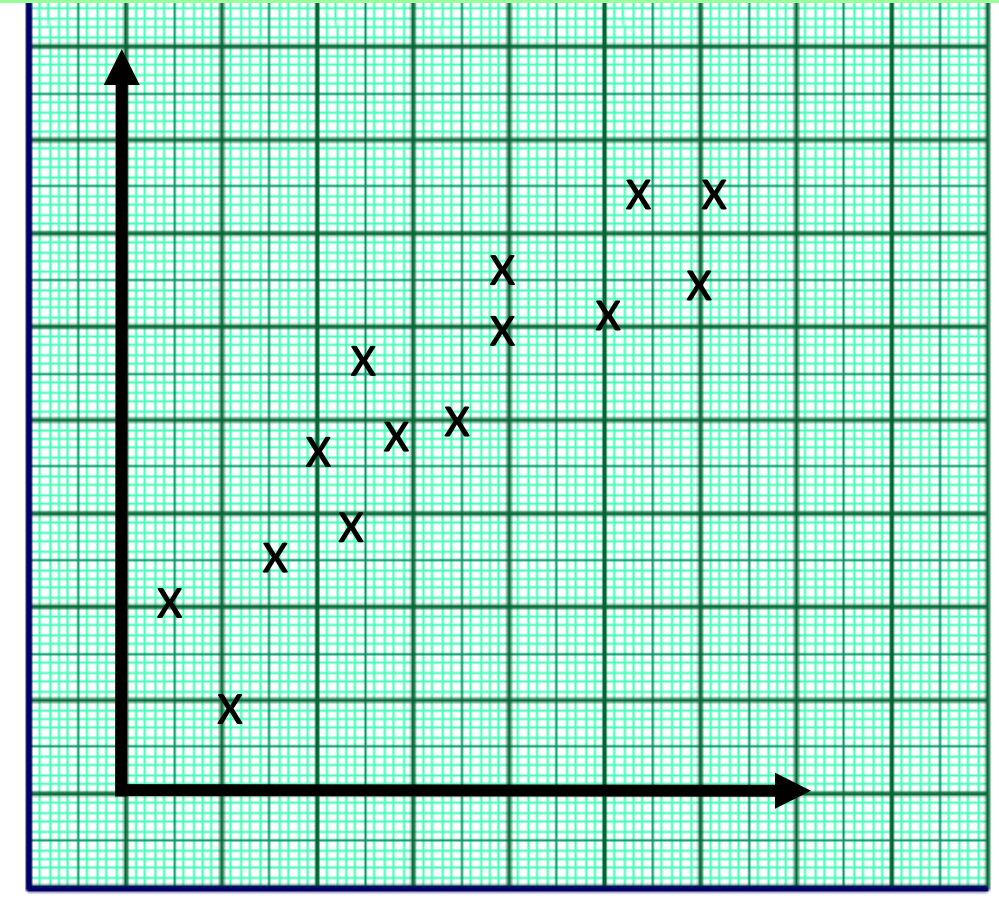



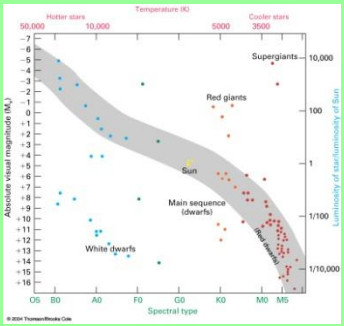
Which type of correlation would you expect there to be on a scatter graph, between outside temperature and sales of ice cream?

# Is this a sensible scatter graph?

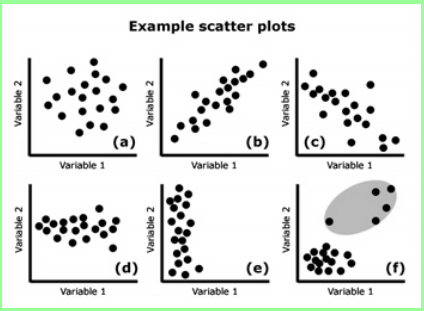
**Number of Bees**



**Ice creams sold**




# Summary




- We have learnt to plot Scatter Graphs
- We have seen the 3 main types of correlation
- We have learnt how to draw and use a line of best fit on a graph