

Summary

HL Statistics (Bivariate Analysis)

Subject	Year	Start date	Duration
Mathematics: analysis and approaches	IB1	Week 1, May	1 week

Course Part

Description

In this chapter we describe and model relationships between pairs of numerical variables

Inquiry & Purpose

? Inquiry / Higher Order Questions

Type	Inquiry Questions
Debatable	Correlation and causation—can we have knowledge of cause and effect relationships given that we can only observe correlation? What factors affect the reliability and validity of mathematical models in describing real-life phenomena?
Skills-based	What are the dangers of extrapolation?

Curriculum

⊕ Aims

Employ and refine their powers of abstraction and generalization

◇ Objectives

Technology: Use technology accurately, appropriately and efficiently both to explore new ideas and to solve problems.

📖 Syllabus Content

Topic 4: Statistics and probability

SL Content

SL 4.4

Linear correlation of bivariate data.

Pearson's product-moment correlation coefficient, r .

Scatter diagrams; lines of best fit, by eye, passing through the mean point.

Equation of the regression line of y on x .

Use of the equation of the regression line for prediction purposes.

Interpret the meaning of the parameters, a and b , in a linear regression $y = ax + b$.

SL 4.10

Equation of the regression line of x on y .

Use of the equation for prediction purposes.

ATL Skills

Approaches to Learning



Thinking

- In this unit, we will

ask students to formulate a reasoned argument to support their opinion or conclusion

give students time to think through their answers before asking them for a response

reward a new personal understanding, solution or approach to an issue

ask open questions

set students a task which required higher-order thinking skills (such as analysis or evaluation)

build on a specific prior task

help students to make their thinking more visible (for example, by using a strategy such as a thinking routine)

require students to take an unfamiliar viewpoint into account when formulating arguments

ask questions that required the use of knowledge from a different subject from the one you are teaching

include a reflection activity

make a link to TOK



Developing IB Learners

Learner Profile



Inquirers

IB DP Maths HL AA IB1 (IB1)



Knowledgeable



Thinkers



Communicators



Risk-takers (Courageous)



Reflective