MAKING REGRESSION ANALYSIS EASY USING A CASIO SCIENTIFIC CALCULATOR

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CASIO

TARGET AUDIENCE: Further Education & Training – Mathematics
DURATION: 1 hour
MAXIMUM NUMBER OF PARTICIPANTS: 50

MOTIVATION

As of 2014, the Grade 12 Statistics syllabus involves the learners making use of available technology to: *[12.10.1 (b)] calculate the linear regression line which best fits a given set of bivariate numerical data* and *[12.10.1 (c)] calculate the correlation co-efficient of a set of bivariate numerical data*. As stated by the current Maths CAPS document. This workshop serves to increase educators understanding of the Casio Scientific calculator. In turn, it will foster self confidence and a positive attitude towards Statistics, enhancing both the educators and learners understanding of the topic.

CONTENT

This workshop will cover: Identifying the relationship between bivariate numerical data, inputting bivariate data into the Casio scientific calculator, calculating the correlation co-efficient, finding the equation of the regression line, calculating projected values - Interpolation & Extrapolation, using TABLE MODE to find the co-ordinates of the line of best fit and choosing a random sample of numbers.

Activity	Time
Identifying the relationship between bivariate numerical data	5 min
Inputting bivariate data into the Casio scientific calculator	8 min
Calculating the correlation co-efficient	8 min
Finding the equation of the regression line	5 min
Calculating projected values - Interpolation & Extrapolation	5 min
Using TABLE MODE to find the co-ordinates of the line of best fit	9 min
Choosing a random sample of numbers	5 min
Discussion	15 min

ABSTRACT

Adequate knowledge of calculator skills makes the teaching of Statistics to Grade 12 learners easier and enables the educator to assist their learners more efficiently. This workshop will guide you through Linear Regression Analysis, including finding relationships between variables, the line of best fit and making projections, using the Casio Scientific calculator. Equipment required**:** *Casio fx-82ZA PLUS* Scientific Calculator.

Scheiber, A. (2013). Making regression analysis easy using a Casio scientific calculator. In Z. Davis & S. Jaffer (Eds.), *Proceedings of the 19th Annual Congress of the Association for Mathematics Education of South Africa*, Vol. 2. (pp. 58). Cape Town: AMESA.