JOHN EDMONDSON HIGH SCHOOL
Assessment Notification

Faculty: Mathematics Course: Mathematics Standard 2 Year: 12

Assessment Task: 3

Assessment Weighting: 20% Due: Term 2, Week 6 Date: Monday 3rd June 2024

Task Type: Hand in Task ☐ In Class Task ☒ Practical Task ☐

Outcomes Assessed (NESA)
MS11-3, MS 11-4, MS11-10, MS2-12-1, MS2-12-2, MS2-12-6 MS2-12-7, MS2-12-10, MS2-12-3, MS2-12-4, MS2-12-9 Please Note: Further information about these outcome codes can be found on the NESA Website
Task Description/Overview
This in class written examination will consist of multiple choice and short answer questions A Mathematics Standard 2 Reference Sheet will be provided Time allowed: 1 hour 30 minutes plus 5 minutes reading time Equipment Required: Black Pen(s), a NESA approved calculator and ruler
Detailed Assessment Task Description

Topics to be assessed will be:

Simultaneous linear equations:

Examination questions may require students to graph linear functions, interpret linear functions as models of physical phenomena, develop linear equations from descriptions of situations, solve a pair of simultaneous linear equations using graphical methods, find the point of intersection between two straight-line graphs, develop a pair of simultaneous linear equations to model a practical situation, solve practical problems by modelling with a pair of simultaneous linear functions, apply break-even analysis to solve simple problems.

Non-linear Relationships:

Examination questions may require students to graph and recognise a exponential functions, construct and analyse exponential models to solve practical problems, graph and recognise quadratic functions, recognise the shape of a parabola and its key features, construct and analyse quadratic models to solve practical problems, graph and recognise reciprocal functions, recognise the shape of a hyperbola and its key features, construct and analyse a reciprocal model to solve practical problems.

Rates and Ratios:

Examination questions may require students to use rates to solve and describe practical problems, use rates to make comparisons, interpret the energy rating of household appliances and compare running costs, solve practical problems involving ratios, use ratios to describe map scales, obtain measurements from scale drawings, interpret symbols and abbreviations on building plans and elevation views, calculate perimeter, area and volume using a scale.

Bivariate Data Analysis:

Examination questions may require students to construct bivariate scatterplots to identify patterns in data, use bivariate scatterplots to describe the patterns, features and associations of bivariate data, identify the dependent and independent variables within bivariate datasets, calculate and interpret Pearson's correlation coefficient to quantify the strength of a linear association of a sample, model a linear association by fitting an appropriate line of best fit to a scatterplot and using it to describe patterns and associations, model a linear association by fitting a least-squares regression line to the data, use an appropriate line of best fit to make predictions by either interpolation or extrapolation.

Please Note: More detailed topic overviews are published on CANVAS

Examination Structure

Section Description	**Marks Available**
Section 1 – Multiple Choice	
10 Multiple Choice Questions	10
Section 2 – Short Answer	
Simultaneous linear equations	12
Non-linear Relationships	10
Rates and Ratios	13
Bivariate Data Analysis	15
Total Marks for this task	**60**

Satisfactory completion of courses

A course has been satisfactorily completed when the student has:

- Followed the course developed/endorsed by the NSW Educational Standards Authority (NESA)
- Applied himself/herself with diligence and sustained effort to the set tasks and experiences provided in the course.
- Achieved some or all the course outcomes.