JOHN EDMONDSON HIGH SCHOOL
Assessment Notification

Faculty: Mathematics **Course: Mathematics Standard (Core)** **Year: 9**

Assessment Task: 2

Assessment Weighting: 30% **Due: Term 2, Week 4B** **Date: Thursday 23 May 2024**

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

Outcomes assessed (NESA)

MA5-FIN-C-01, MAO-WM-01, MA5-MAG-C-01

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 short answer questions. No reference material is allowed during the examination.

Time allowed: 45 Minutes (within 1 Period)
Equipment Required: Black Pen(s) and a NESA approved calculator.

Detailed Assessment Task Description

Questions may require students to:

Financial Mathematics

- Solve problems involving wages given an hourly rate of pay including penalty rates for overtime, weekends and public holidays,
- Calculate earnings from non-wage sources exploring commission, piece work and royalties,
- Calculate weekly, fortnightly, monthly and yearly earnings assuming 1 year = 52 weeks,
- Calculate leave loading by finding a percentage of eligible normal pay,
- Investigate sources of published tables or online calculators and use these to calculate the weekly, fortnightly or monthly tax to be deducted from a worker's pay under the Australian Pay-As-You-Go (PAYG) taxation system,
- Determine annual taxable income by exploring allowable deductions and current tax rates,
- Calculate net earnings after deductions and taxation,
- Establish and use the formula $I = Prn$ to find simple interest where $I =$ simple interest, $P =$ principal, $r =$ interest rate per time period and $n =$ number of time periods,
- Apply the simple interest formula to solve problems related to investing money at simple interest rates, both algebraically and graphically,
- Calculate the cost of buying items on terms, by paying an initial deposit and making regular repayments,
- Examine payment options involving buy now, pay later and investigate the costs associated with these schemes for purchasing goods,
- Examine the principles behind short-term loans involving small dollar amounts and compare borrowing costs associated with using these products.

Numbers of any magnitude

- Identify and describe the meaning of common prefixes, such as *milli*, *centi* and *kilo*
- Establish the meaning of prefixes for very small or very large measurement units
- Determine the precision of a measuring instrument by finding the smallest division on the instrument

- Find the absolute error of measuring instruments ($\text{error} = \frac{1}{2} \times \text{precision}$)

- Calculate the percentage error of a given measurement by applying the formula:

$$\text{error} = \frac{absolute\ error}{measurement} \times 100\%$$

- Apply the language of estimation appropriately, including the terms rounding, approximate and level of accuracy
- Round numbers to a specified number of significant figures
- Examine the effect that truncating or rounding during calculations has on the accuracy of the results
- Recognise the need for notation to express very large or very small numbers
- Represent numbers using scientific notation in practical contexts
- Order numbers expressed in scientific notation
- Represent numbers expressed in scientific notation as a decimal
- Estimate the value of calculations involving scientific notation by applying knowledge of index laws
- Solve problems with calculations involving scientific notation using digital tools

Test/Examination Structure	
Section Description	**Marks Available**
Financial Mathematics	30
Numbers of any magnitude	20
Total Marks for this task	**50**

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 of the course outcomes.