JOHN EDMONDSON HIGH SCHOOL
Assessment Notification

Faculty: Mathematics   Course: Mathematics Intermediate (Core + Some Paths)   Year: 9

Assessment Task: 2

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

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

Outcomes assessed (NESA)
MA5-FIN-C-01, MAO-WM-01. MA5-FIN-C-02, 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 + 2 minutes reading time Equipment Required: Black Pen(s) and a NESA approved calculator

Detailed Assessment Task Description

Questions may require students to:

Financial Mathematics A
Solve problems involving earning money
- 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

Solve problems involving simple interest

- 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

Solve problems involving spending money

- 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

Financial Mathematics B
Solve problems involving compound interest and depreciation
- Examine compound interest for up to 3 time periods using repetition of the formula for simple interest
- Associate the calculation of the total value of a compound interest investment with repeated multiplication, using digital tools
- Establish and use the formula $FV = PV(1 + r)^n$ to find compound interest where $FV =$ future value of the investment, $PV =$ present value of the investment, $r =$ interest rate per time period and $n =$ number of time periods
- Solve problems involving compound interest
- Compare simple interest with compound interest in practical situations
- Use the compound interest formula to establish the depreciation formula $S = V_0(1 - r)^n$ where $S =$ salvage value, $V_0 =$ initial value of the asset, $r =$ depreciation rate per time period and $n =$ number of periods
- Solve problems involving the depreciation of an asset

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 (error=$\frac{1}{2}$×precision)
- Calculate the percentage error of a given measurement by applying the formula: error=$\frac{\text{absolute error}}{\text{measurement}}$ ×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

Test/Examination Structure	
Section Description	**Marks Available**
Financial Mathematics A and B	30
Numbers of Any Magnitude	20
Total Marks for this task	**50**