PICTON HIGH SCHOOL
Creating Opportunities Achieving Success

Year 10 Mathematics Assessment Task 2 2024

Due Date: Term 2 Week 4 Friday 24th May (period 3) all classes	**Assessment Name:** in-class test
Graded: A to E	

TASK DESCRIPTION:
You will complete an in-class test with a**t**, that will be in the duration of 45 minutes.

The in-class test will have a combination of multiple choice and short answer questions. The topics included in the exam are:

Financial Mathematics
- Earning Money (salaries, wages, commission, piecework)
- Penalty rates (time and a half, double time, special rates)
- Holiday Pay and Holiday Loading
- Deductions
- Medicare Levy
- Calculating Taxation
- Simple Interest
- Compound Interest
- Depreciation
- Applications of Financial Mathematics

You must provide FULL SOLUTIONS to demonstrate each step of the processes, in order to achieve full marks, even when a calculator is used.

OUTCOMES ADDRESSED

MA5.1-1WM uses appropriate terminology, diagrams and symbols in mathematical contexts

MA5.1-2WM selects and uses appropriate strategies to solve problems

MA5.1-3WM provides reasoning to support conclusions that are appropriate to the context

MA5.1-4WM solves financial problems involving earning, spending and investing money

MA5.2-1WM selects appropriate notations and conventions to communicate mathematical ideas and solutions

MA5.2-2WM interprets mathematical or real-life situations, systematically applying appropriate strategies to solve problems

MA5.2-3WM constructs arguments to prove and justify results

MA5.4-4WM solves financial problems involving compound interest

Check your assessment booklet for the PHS Assessment Policy

Solve problems involving earning money

- calculate earnings from wages for various time periods, given an hourly rate of pay, including penalty rates for overtime and special rates for Sundays and public holidays

- calculate earnings from non-wage sources, including commission and piecework

- calculate weekly, fortnightly, monthly and yearly earnings

- calculate leave loading as 17.5% of normal pay for up to four weeks

- use published tables to determine 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 subtracting allowable deductions and use current tax rates to calculate the amount of tax payable for the financial year

- calculate net earnings after deductions and taxation are taken into account

Solve problems involving simple interest

- calculate simple interest using the formula $I = Prn$ where I is the interest, P is the principal, r is the interest rate per time period (expressed as a fraction or decimal) and n is the number of time periods

- apply the simple interest formula to solve problems related to investing money at simple interest rates

- calculate the cost of buying expensive items by paying an initial deposit and making regular repayments that include simple interest

- Connect the compound interest formula to repeated applications of simple interest using appropriate digital technologies

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Solve Problems involving compound interest

- establish and use the formula to find compound interest:
  $A = P(1 + r)^n$ where A is the total amount, P is the principal, r is the interest rate per compounding period as a decimal, and n is the number of compounding periods

- solve problems involving compound interest

- use the compound interest formula to calculate depreciation

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