

# PICTON HIGH SCHOOL

Creating Opportunities Achieving Success



## Year 10 Mathematics Assessment Task 2 2024

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

### TASK DESCRIPTION:

You will complete an in-class test with at, 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**

## DIRECTIVES TO BE ASSESSED:

<b>Analyse:</b>	To identify causes, key factors, relationships and possible results.
<b>Apply:</b>	To use relevant information and skills for a given situation.
<b>Connect:</b>	To show a clear understanding between the required mathematical knowledge or process.
<b>Interpret:</b>	To draw meaning from a mathematical situation.
<b>Select:</b>	To carefully choose a value/item as being the best or most suitable.
<b>Solve:</b>	To manipulate something for a particular purpose to find the answer for mathematical problems.
<b>Use:</b>	To seek or achieve an end by means of.

## ASSESSMENT CRITERIA AND STUDENT CHECKLIST

Have you:

- Put the due date in your calendar?
- Completed all classwork and checked CANVAS/TEAMS?
- Prepared a hand written A4 sheet back-to-back ready to bring into the exam?
- Asked your teacher for clarification or assistance on any problems?
- Revised the topics:
  - Financial Mathematics
- Have a NESA-approved scientific calculator, pens, rulers, pencils and erasers?

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