



<b>Task Number</b>	1	<b>Task Name</b>	Portfolio task with quiz
<b>Course</b>	Preliminary Mathematics Standard	<b>Faculty</b>	Mathematics
<b>Teacher</b>	Ms Humphrys, Mrs Tyson, Mr Broadley	<b>Head Teacher</b>	Ms Humphrys
<b>Issue date</b>	26/02/2024	<b>Due date</b>	11/03/2024
<b>Focus (Topic)</b>	Formulas and Equations	<b>Task Weighting</b>	30%

### Outcomes

**MS11-1** uses algebraic and graphical techniques to compare alternative solutions to contextual problems

**MS11-2** represents information in symbolic, graphical and tabular form

### Task description

**This task has two components:**

**A. Portfolio (40%)**

Submission of a portfolio of work that includes summary notes, related questions, and student created questions for the topic **Formulas and Equations**.

**B. 1 Period in-class Quiz (60%)**

Completion of an in class quiz for the topic **Formulas and Equations**.

*A copy of the assessment task can be found on Google Classroom. The code for the Google Classroom is: **q56qc4x***

### ASSESSMENT CRITERIA:

Students will be assessed on their ability to:

- communicate using mathematical terminology, notation, and/or diagrams
- demonstrate knowledge and skill appropriate to the course
- select and apply mathematical concepts, skills and techniques

**Note:**

- *What if a student is absent from a lesson?*
  - *It is the students responsibility to catch up on any missed work due to absences*
- *Solutions to questions must be in the student's own hand writing, **NO photocopied** content will be accepted.*
- *All work submitted must be the students independent work as demonstrated in the "All my own work" modules*

## Year 11 Task 1: Marking Guidelines

Outcome	Limited	Basic	Sound	High	Outstanding
MS11-2 represents information in symbolic, graphical and tabular form <b>SUMMARIES</b>	Has completed 3 or less summaries.  OR summaries are incorrect and unrelated to the topic.	Has completed 5 or less summaries.  OR summaries have errors.  OR summaries do not summarise concept.	All 7 Summaries are concise and explain the concept.  BUT have minimal use of mathematical language and keywords.	All 7 Summaries explain concepts concisely using correct mathematical language.  BUT contain some minimal errors.	All 7 Summaries explain concepts concisely using correct mathematical language.
MS11-1 uses algebraic and graphical techniques to compare alternative solutions to contextual problems <b>CREATED QUESTIONS</b>	Has developed 3 or less questions.	Has completed 5 or less questions.  OR questions contain substantial errors in working.	Has developed questions but are very similar to questions to ones provided. Questions developed are easy to solve and require minimal working.	Questions developed require full mathematical working to solve and are related directly to the concept.  BUT contains minimal errors in working.	Questions developed require full mathematical working to solve and are related directly to the concept.
<b>Comments:</b>					



Preliminary Mathematics Standard Portfolio Summary

Name: \_\_\_\_\_ Teacher: \_\_\_\_\_

	Concept	Summary	Examples	Create your own question and solve
1	2.01 Simplifying Algebraic Expressions		<i>Simplify:</i> $2k + 8 - k^2 - 4k$  <i>Simplify:</i> $\frac{2x^2}{w} \times \frac{b}{2}$  <i>Simplify:</i> $\frac{x}{3} \div \frac{x}{2}$	

2	2.02 Expanding Algebraic Expressions		Expand: $3ab(a + b)$	
3	2.03 Formulas		Use the compound interest formula, $A = P(1 + r)^n$ to calculate the amount to which a principal of \$5600 will grow if invested at 9.4% for 5 years.	

4	2.04 Solving Equations		<p><b>Solve:</b></p> $\frac{x-2}{3} + 10 = 20$ <p><b>Solve:</b></p> $8e = 2(e - 6)$	
5	2.05 Formulas and equations		<p><b>If <math>a = 2</math>, <math>b = 3</math>, solve for <math>c</math>:</b></p> $\frac{2c}{a} + b = 10$	

6	2.06 Changing the subject of a formula		Make $F$ the subject of the formula $C = \frac{5}{9}(F - 32)$	
7	12.01 Blood alcohol content (BAC)		Who has the lowest blood alcohol level? A 78kg male who consumed 6 standard drinks over 4 hours or a 58kg female who consumed 4 standard drinks over 3 hours. Use calculations to justify your choice.	