



# MOUNT ANNAN HIGH SCHOOL

## ASSESSMENT TASK NOTIFICATION

Year 12 Stage 6	
<b>Subject:</b> Year 12 Standard 2 Mathematics	<b>Focus Area:</b> Non-right-angled Trigonometry, Ratios and Rates, Bivariate Data analysis, The Normal Distribution
<b>Weighting:</b> 20%	<b>Date of Task:</b> Week 7 Term 1 2025 Thursday, 20 March – period 3
<b>Task No.:</b> 2	<b>Type of Task:</b> In-Class Test

### Outcomes addressed

A student:

MS2-12-2	Analyses representations of data in order to make inferences, predictions and draw conclusions
MS2-12-3	Interprets the results of measurements and calculations and make judgements about their reasonableness, including the degree of accuracy and the conversion of units where appropriate
MS2-12-4	Analyses two-dimensional and three-dimensional models to solve practical problems
MS2-12-7	Solves problems requiring statistical processes, including the use of the normal distribution and the correlation of bivariate data
MS2-12-9	Chooses and uses appropriate technology effectively in a range of contexts, and applies critical thinking to recognise appropriate times and methods for such use
MS2-12-10	Uses mathematical argument and reasoning to evaluate conclusions, communicating a position clearly to others and justifying a response

**Assessment Policy- *This is a brief outline, you must check your assessment booklet for further details. Assessment task must be submitted on the due date.***

- **Failure to complete an assessment task will result in a zero mark.**
- Late submission of assessment items **will be awarded zero** unless there are very extenuating circumstances (Doctor's Certificate, etc.)
- Students found guilty of malpractice will be awarded a zero mark. If a piece of work is incomplete at the time of submission, it should be submitted as is, and you will be given a mark on what has been completed.
- See their teacher or head teacher on the **first day they return** back to school

**Please see page 2 for specific task information**



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### Specific task information as needed:

<p><b>What will task look like:</b></p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> The task will be an in-class test</li> <li><input type="checkbox"/> You need to answer all the questions. ALL working must be shown.</li> <li><input type="checkbox"/> Task will consist of both multiple choice and short answer questions</li> <li><input type="checkbox"/> Marks allocated to each of the short answer questions will be clearly identified on the paper</li> <li><input type="checkbox"/> You may bring a hand-written reference sheet 2 pages (1 double sided A4)</li> <li><input type="checkbox"/> A NESA approved scientific calculator is needed to complete your test</li> <li><input type="checkbox"/> You will be supplied with the NESA HSC Reference sheet</li> </ul>		
<p><b>What will be in the task</b></p>	<p style="text-align: center;"><b>This assessment task will assess your knowledge of the following topics:</b></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top; padding-right: 10px;"> <ul style="list-style-type: none"> <li>● <b>Non-right-angled trigonometry</b> <ul style="list-style-type: none"> <li>○ Applying right-angled trigonometry</li> <li>○ Finding an unknown side or angle using sine or cosine rules</li> <li>○ Area of a triangles</li> <li>○ Application of bearings</li> <li>○ Radial surveys</li> </ul> </li> <li>● <b>Ratio and Rates</b> <ul style="list-style-type: none"> <li>○ Use, application and conversion of rates including concentrations, heart rates and energy rates</li> <li>○ Calculations with ratios</li> <li>○ Problems involving rates, ratios, scale drawing, plans and elevations including those that may involve perimeter, area and volume</li> </ul> </li> </ul> </td> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> <li>● <b>Bivariate data analysis</b> <ul style="list-style-type: none"> <li>○ Constructing, using or interpreting bivariate scatterplots, including strength, direction and form and the use of interpolation and extrapolation</li> <li>○ Calculating and interpreting Pearson's coefficient</li> <li>○ Drawing and interpreting the line of best fit including finding the equation</li> <li>○ Problems involving statistical investigation</li> </ul> </li> <li>● <b>Normal Distribution</b> <ul style="list-style-type: none"> <li>○ Interpreting and making calculations involving z-score and normally distributed data</li> <li>○ Using z-scores to compare data or calculate results</li> <li>○ Solving problems involving the normal distribution</li> </ul> </li> </ul> </td> </tr> </table>	<ul style="list-style-type: none"> <li>● <b>Non-right-angled trigonometry</b> <ul style="list-style-type: none"> <li>○ Applying right-angled trigonometry</li> <li>○ Finding an unknown side or angle using sine or cosine rules</li> <li>○ Area of a triangles</li> <li>○ Application of bearings</li> <li>○ Radial surveys</li> </ul> </li> <li>● <b>Ratio and Rates</b> <ul style="list-style-type: none"> <li>○ Use, application and conversion of rates including concentrations, heart rates and energy rates</li> <li>○ Calculations with ratios</li> <li>○ Problems involving rates, ratios, scale drawing, plans and elevations including those that may involve perimeter, area and volume</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● <b>Bivariate data analysis</b> <ul style="list-style-type: none"> <li>○ Constructing, using or interpreting bivariate scatterplots, including strength, direction and form and the use of interpolation and extrapolation</li> <li>○ Calculating and interpreting Pearson's coefficient</li> <li>○ Drawing and interpreting the line of best fit including finding the equation</li> <li>○ Problems involving statistical investigation</li> </ul> </li> <li>● <b>Normal Distribution</b> <ul style="list-style-type: none"> <li>○ Interpreting and making calculations involving z-score and normally distributed data</li> <li>○ Using z-scores to compare data or calculate results</li> <li>○ Solving problems involving the normal distribution</li> </ul> </li> </ul>
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## Discriminating feature of Bands 5 and 6

Applies problem solving strategies to a wide range of contexts.

### Performance Band Descriptions for Mathematics Standard 2

Band 6	<ul style="list-style-type: none"> <li>• Demonstrates extensive knowledge and skills appropriate to the course</li> <li>• Applies appropriate mathematical concepts, skills and techniques consistently and accurately in a wide range of familiar and unfamiliar contexts</li> <li>• Selects and uses a wide variety of problem-solving strategies to solve mathematical problems</li> <li>• Demonstrates mathematical reasoning and justification, and interprets and analyses mathematical models</li> <li>• Communicates effectively using appropriate mathematical language, notation, diagrams and graphs</li> </ul>
Band 5	<ul style="list-style-type: none"> <li>• Demonstrates thorough knowledge and skills appropriate to the course</li> <li>• Applies appropriate mathematical concepts, skills and techniques accurately in a range of familiar and unfamiliar contexts</li> <li>• Selects and uses a variety of problem-solving strategies to solve mathematical problems</li> <li>• Demonstrates mathematical reasoning and interprets mathematical models</li> <li>• Communicates using appropriate mathematical language, notation, diagrams and graphs</li> </ul>
Band 4	<ul style="list-style-type: none"> <li>• Demonstrates sound knowledge and skills appropriate to the course</li> <li>• Uses mathematical concepts, skills and techniques in familiar contexts and some unfamiliar contexts</li> <li>• Uses problem-solving strategies to solve mathematical problems</li> <li>• Uses some mathematical reasoning and mathematical models</li> <li>• Communicates using some appropriate mathematical language, notation, diagrams and graphs</li> </ul>
Band 3	<ul style="list-style-type: none"> <li>• Demonstrates basic knowledge and skills appropriate to the course</li> <li>• Uses mathematical concepts, skills and techniques in familiar contexts</li> <li>• Uses some mathematical reasoning</li> <li>• Uses some mathematical language, notation, diagrams and graphs</li> </ul>
Band 2	<ul style="list-style-type: none"> <li>• Demonstrates limited knowledge and skills appropriate to the course</li> <li>• Uses basic mathematical concepts, skills and techniques to solve problems with limited accuracy</li> <li>• Uses some mathematical language and simple diagrams</li> </ul>
Band 1	