

## YEAR 12 – MATHEMATICS (Week 4)

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| <b>Subject</b>   | Mathematics (Pure Math & Stat)  |
| <b>Class/ Section</b>  | Year 12 – Batch 1, 2 and 3  |
| <b>Week</b>  | 20 <sup>th</sup> September to 24 <sup>th</sup> September 2020   |
| <b>Work send to students by</b>  | Group email / Google classroom / Zoom   |
| <b>Total number of lessons per week</b>  | 6   |
| <b>Units</b>   | <p><b>PURE MATH- Ch 4(Graphs and transformations)</b><br/> <b>4.1 – Cubic graphs</b><br/> <b>4.2 –Quartic graphs</b><br/> <b>4.3 –Reciprocal graphs</b><br/> <b>4.4 –Points of intersection</b></p> <p><b>STATISTICS – Ch 1 (Data Collection)</b></p>   |
| <p><b>Lessons 1&amp;2 –Live Zoom lessons</b></p> <p><b>Tasks</b></p> <p><b>Resources</b></p> | <p><b>Ch 4(Graphs and transformations)</b></p> <p><b>4.1 – Cubic graphs</b><br/> <b>4.2 –Quartic graphs</b><br/> <b>4.3 –Reciprocal graphs</b></p> <p><b><u>Learning objective</u></b> – To sketch the graph of Cubic, Quartic, Reciprocal functions,</p> <p><b><u>Intended Learning Outcomes</u></b></p> <p>Students will be able to sketch cubic, Quartic, Reciprocal graph by finding the roots of the function.</p> <p>To complete the questions assigned from the Textbook (pdf) in their notebook. Students will be put in break out rooms during Zoom lesson to encourage collaborative learning.</p> <ol style="list-style-type: none"> <li>1. Power point presentation</li> <li>2. Pure Mathematics Year 1 / AS</li> <li>3. <a href="https://www.physicsandmathstutor.com/">https://www.physicsandmathstutor.com/</a></li> <li>4. <a href="https://www.drfrostmaths.com/">https://www.drfrostmaths.com/</a></li> <li>5. <a href="https://www.examsolutions.net/">https://www.examsolutions.net/</a></li> </ol> |

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| <p><b>Lessons 3 –Live Zoom lesson</b></p><br><br><br><br><br><br><br><br><br><br><br><p><b>Tasks</b></p><br><br><br><br><p><b>Resources</b></p> | <p><b>Ch 4(Graphs and transformations)</b></p> <p><b>4.4 – Points of intersection</b></p> <p><b><u>Learning objective</u></b> – To find points of intersection and solutions to equations.</p> <p><b><u>Intended Learning Outcomes</u></b> - Students will be able to sketch curves of functions to show points of intersection and solutions to equations</p> <p>To complete the questions assigned from the Textbook (pdf) in their notebook. Students will be put in break out rooms during Zoom lesson to encourage collaborative learning.</p> <ol style="list-style-type: none"> <li>1. Power point presentation</li> <li>2. Pure Mathematics Year 1 / AS</li> <li>3. <a href="https://www.physicsandmathstutor.com/">https://www.physicsandmathstutor.com/</a></li> <li>4. <a href="https://www.drfrostmaths.com/">https://www.drfrostmaths.com/</a></li> <li>5. <a href="https://www.examsolutions.net/">https://www.examsolutions.net/</a></li> </ol>   |
| <p><b>Lessons 4 –Live Zoom lesson</b></p><br><br><br><br><br><br><br><br><br><br><br><p><b>Tasks</b></p><br><br><br><br><p><b>Resource</b></p>  | <p><b>1.3 – Non random sampling</b></p> <p><b>1.4 – Types of data</b></p> <p><b><u>Learning objective</u></b> – To understand the advantages and disadvantages of quota sampling and opportunity sampling.</p> <p><b><u>Intended Learning Outcomes</u></b></p> <p>--Students will be able to</p> <ul style="list-style-type: none"> <li>• Understand the need non random sampling</li> <li>• Decide which non random sampling method to be used.</li> <li>• Are these sampling methods reliable and in what situations?</li> </ul> <p>To complete the questions assigned from the Textbook (pdf) in their notebook. Students will be put in break out rooms during Zoom lesson to encourage collaborative learning.</p> <ol style="list-style-type: none"> <li>1. Power point presentation</li> <li>2. Statistics and Mechanics Year 1 / AS</li> <li>3. <a href="https://www.physicsandmathstutor.com/">https://www.physicsandmathstutor.com/</a></li> <li>4. <a href="https://www.drfrostmaths.com/">https://www.drfrostmaths.com/</a></li> <li>5. <a href="https://www.examsolutions.net/a-level-maths/edexcel/edexcel-a-level-maths-past-papers/">https://www.examsolutions.net/a-level-maths/edexcel/edexcel-a-level-maths-past-papers/</a></li> </ol> |

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| <p><b>Lessons 5 –Live Zoom lesson</b></p> <p><b>Tasks</b></p> <p><b>Resource</b></p>             | <p><b>1.5 – The large data set</b></p> <p><b><u>Learning objective</u> – To understand the large data set and how to collect data from it. Identify types of data and calculate simple statistics.</b></p> <p><b><u>Intended Learning Outcomes</u></b></p> <p>--Students will be able to understand Large Data set and the different weather variables. The data set consists of weather stations over two set periods of time.<br/> -- Students will be able to answer the questions based on real data in your exam. Some of these questions will be based on weather data from the Large data set provided by Edexcel. The relevant extract from the data set will be provided.<br/> To complete the questions assigned from the Textbook (pdf) in their notebook. Students will be put in break out rooms during Zoom lesson to encourage collaborative learning.</p> <ol style="list-style-type: none"> <li>1. Power point presentation</li> <li>2. Statistics and Mechanics Year 1 / AS</li> <li>3. <a href="https://www.physicsandmathstutor.com/">https://www.physicsandmathstutor.com/</a></li> <li>4. <a href="https://www.drfrostmaths.com/">https://www.drfrostmaths.com/</a></li> <li>5. <a href="https://www.examsolutions.net/a-level-maths/edexcel/edexcel-a-level-maths-past-papers/">https://www.examsolutions.net/a-level-maths/edexcel/edexcel-a-level-maths-past-papers/</a></li> </ol> |
| <p><b>Lesson 6</b></p> <p><b>Google Classroom</b></p> <p><b>Task</b></p> <p><b>Resources</b></p> | <p><b><u>Learning objective</u></b></p> <p><b>To do problems involving Data Collection.</b></p> <p><b><u>Intended Learning Outcome:</u></b></p> <p><b>By the end of the lesson students will be able to do the problems from the mixed exercise of Chapter 1 – Data Collection, from pages 16 to 18.</b></p> <p><b>Work will be assigned in Google Classroom.</b></p> <p><b>Text Book : Statistics and Mechanics Year 1 / AS</b></p>   |