

## YEAR 12 – MATHEMATICS (Week 23)

<b>Subject</b>	Mathematics (Pure Math & Stats)
<b>Class/ Section</b>	Year 12 – Batch 1, 2 and 3
<b>Week</b>	31 <sup>st</sup> January – 4th February 2021
<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- Ch11(Vectors )</b>  <b>11.1 (Vectors)</b>  <b>11.2(Representing vectors)</b>  <b>11.3(Magnitude and direction)</b></p> <p><b>STATISTICS – Ch 7</b></p>
<p><b>Lessons 1 –Live Zoom lesson</b></p> <p><b>Tasks</b></p> <p><b>Resources</b></p>	<p><b>PURE MATH- Ch11(Vectors)</b>  <b>11.1 (Vectors)</b>  <u><b>Learning objective</b></u> : To use vectors in two dimensions</p> <p><u><b>Intended Learning Outcomes</b></u> - Students will be able to use the vector in two dimensions.</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>Lesson 2 - Live Zoom lesson</b></p> <p><b>Tasks</b></p> <p><b>Resources</b></p>	<p><b>PURE MATH- Ch11(Vectors)</b> <b>11.2(Representing vectors )</b></p> <p><b><u>Learning objective</u></b> - To use column vectors and carry out arithmetic operations on vectors .</p> <p><b><u>Intended Learning Outcomes</u></b> – Students will be able to use column vectors and carry out arithmetic operations on vectors</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 3 - Live Zoom lesson</b></p> <p><b>Task</b></p> <p><b>Resources</b></p>	<p><b>PURE MATH- Ch11(Vectors)</b> <b>11.3(Magnitude and direction)</b></p> <p><b><u>Learning objective</u></b> - To calculate the magnitude and direction of a vector .</p> <p><b><u>Intended Learning Outcomes</u></b> – Students will be able to use Pythagoras theorem to calculate the magnitude of a vector.</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>	<p><b>STATISTICS – 7.1 Hypothesis testing</b></p> <p><b><u>Learning objective</u></b> – To understand the language and concept of hypothesis testing. To understand that a sample is used to make an inference about a population.</p> <p><b><u>Intended Learning Outcomes</u></b></p> <p>--Students will be able to understand that hypothesis is a statement made about the value of a population parameter. The result of the experiment or the statistic that is calculated from the sample is called the test statistic. The null hypothesis, <math>H_0</math> is the hypothesis that you assume to be correct. The alternative hypothesis, <math>H_1</math>, tells you</p>

<p><b>Tasks</b></p> <p><b>Resource</b></p>	<p>about the parameter if your assumption is shown to be wrong.</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. 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>Lessons 5 –Live Zoom lesson</b></p> <p><b>Tasks</b></p> <p><b>Resource</b></p>	<p><b>7.2 – Finding critical values</b></p> <p><b><u>Learning objective</u></b> – To find critical values of a binomial distribution using tables.</p> <p><b><u>Intended Learning Outcomes</u></b></p> <p>--Students will be able to understand that critical region is a region of the probability distribution which, if the test statistic falls within it, would cause you to reject the null hypothesis. The critical value is the first value to fall inside of the critical region. The actual significance level of a hypothesis test is the probability of incorrectly rejecting the null hypothesis.</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. 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>Lessons 6 –Live Zoom lesson</b></p> <p><b>Tasks</b></p> <p><b>Resource</b></p>	<p><b>To do problems involving Hypothesis testing.</b></p> <p><b>Intended Learning Outcome:</b></p> <p><b>By the end of the lesson students will be able to do problems from the Mixed exercise – Chapter 7 (Hypothesis testing). Pages 109 - 111.</b></p> <p><b>Work will be assigned in Google Classroom.</b></p> <ol style="list-style-type: none"> <li>1. <b>Text Book</b> : Statistics and Mechanics Year 1 / AS</li> </ol>