

YEAR 12 – MATHEMATICS (Week 24)

Subject	Mathematics (Pure Math & Stats)
Class/ Section	Year 12 – Batch 1, 2 and 3
Week	7th February – 11th February 2021
Work send to students by	Group email / Google classroom / Zoom
Total number of lessons per week	6
Units	PURE MATH- Ch11(Vectors) 11.4 (Position Vectors) 11.5 (Solving geometric problems) 11.6 (Modelling with vectors) STATISTICS – Ch 7
Lessons 1 –Live Zoom lesson	PURE MATH- Ch11(Vectors) 11.4 (Position Vectors) <u>Learning objective</u> : To understand and use the position vectors . <u>Intended Learning Outcomes</u> - Students will be able to use vectors to describe of a point in two dimensions.
Tasks	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.
Resources	<ol style="list-style-type: none">1. Power point presentation2. Pure Mathematics Year 1 / AS3. https://www.physicsandmathstutor.com/4. https://www.drfrostmaths.com/5. https://www.examsolutions.net/

<p>Lesson 2 - Live Zoom lesson</p> <p>Tasks</p> <p>Resources</p>	<p>PURE MATH- Ch11(Vectors) 11.5(Solving geometric problems)</p> <p><u>Learning objective</u> - To use vectors to solve geometric problems .</p> <p><u>Intended Learning Outcomes</u> – Students will be able to use vectors to solve geometric problems and to find the position vector of a point that divides a line segment in a give ratio.</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"> 1. Power point presentation 2. Pure Mathematics Year 1 / AS 3. https://www.physicsandmathstutor.com/ 4. https://www.drfrostmaths.com/ 5. https://www.examsolutions.net/
<p>Lessons 3 - Live Zoom lesson</p> <p>Task</p> <p>Resources</p>	<p>PURE MATH- Ch11(Vectors) 11.6 (Modelling with vectors)</p> <p><u>Learning objective</u> – To understand vector magnitude and use vectors in speed and distance calculations. To use vectors to solve Problems in context.</p> <p><u>Intended Learning Outcomes</u> – Students will be able use vectors to solve problems in context .</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"> 1. Power point presentation 2. Pure Mathematics Year 1 / AS 3. https://www.physicsandmathstutor.com/ 4. https://www.drfrostmaths.com/ 5. https://www.examsolutions.net/
<p>Lessons 4 –Live Zoom lesson</p>	<p>STATISTICS – 7.3 One-tailed tests</p> <p><u>Learning objective</u> – To carry out a one-tailed test for the proportion of the binomial distribution and interpret the results.</p> <p><u>Intended Learning Outcomes</u></p> <p>--Students will be able to understand that to carry out a one-tailed hypothesis test we need to, Formulate a model for the test statistic Identify suitable null and alternate hypothesis, Calculate the probability of the test statistic taking the observed value (or higher/lower), assuming the null hypothesis is true. Compare this to the significance level, write a conclusion in the context of the question. Alternatively, you can find the critical region and see whether the observed value of the test statistic lies inside it.</p>

<p>Tasks</p> <p>Resource</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"> 1. Power point presentation 2. Statistics and Mechanics Year 1 / AS 3. https://www.physicsandmathstutor.com/ 4. https://www.drfrostmaths.com/ 5. https://www.examsolutions.net/a-level-maths/edexcel/edexcel-a-level-maths-past-papers/
<p>Lessons 5 –Live Zoom lesson</p> <p>Tasks</p> <p>Resource</p>	<p>7.4 – Two-tailed tests</p> <p>Learning objective – To carry out a two-tailed test for the proportion of the binomial distribution and interpret the results.</p> <p>Intended Learning Outcomes</p> <p>--Students will be able to understand that a two tailed test is used when it is thought that the probability has changed in either direction. For a two tailed test, half the significance level at the end you are testing. You need to know which tail of the distribution you are testing. If the test statistic is $X \sim B(n, p)$ then the expected outcome is np. If the observed value is higher than the expected value, then consider $P(X \geq x)$.</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"> 1. Power point presentation 2. Statistics and Mechanics Year 1 / AS 3. https://www.physicsandmathstutor.com/ 4. https://www.drfrostmaths.com/ 5. https://www.examsolutions.net/a-level-maths/edexcel/edexcel-a-level-maths-past-papers/
<p>Lessons 6 –Live Zoom lesson</p> <p>Tasks</p> <p>Resource</p>	<p>To do problems involving Hypothesis testing.</p> <p>Intended Learning Outcome:</p> <p>By the end of the lesson students will be able to do problems from the Mixed exercise – Chapter 7 (Hypothesis testing). Pages 109 - 111.</p> <p>Work will be assigned in Google Classroom.</p> <ol style="list-style-type: none"> 1. Text Book : Statistics and Mechanics Year 1 / AS