# YEAR 12 – MATHEMATICS (Week 29)

| Subject | Mathematics (Pure Math & Stats) |
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| Class/ Section | Year 12 – Batch 1, 2 and 3 |
| Week | 14th March – 18th March 2021 |
| Work send to students by | Group email / Google classroom / Zoom |
| Total number of lessons per week | 6 |
| Units | **PURE MATH- Ch13(Integration)**<br>**13.5(Area under curves)**<br>**13.6(Area under the x -axis)**<br>**STATISTICS – Book 2 – Ch 2 (Conditional Probability)** |

| Lessons 1 –Live Zoom lesson | **PURE MATH- Ch13(Integration)**<br>**13.5(Area under curves)**<br><br>**Learning objective** : Find the area bounded by the curve and the x-axis.<br><br>**Intended Learning Outcomes** - Students will be able find the area under the curve by definite integration . |
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| **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** | 1. Power point presentation<br>2. Pure Mathematics Year 1 / AS<br>3. https://www.physicsandmathstutor.com/<br>4. https://www.drfrostmaths.com/<br>5. https://www.examsolutions.net/ |
| Lesson 2 - Live Zoom lesson | **PURE MATH- Ch13(Integration)**<br>**13.6(Area under the x -axis)**<br><br>**Learning objective** - –: Find the area bounded by the curve and the x-axis.<br>**Intended Learning Outcomes** - Students will be able find the area below the x-axis.<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. |
| **Tasks** | 1. Power point presentation<br>2. Pure Mathematics Year 1 / AS<br>3. https://www.physicsandmathstutor.com/<br>4. https://www.drfrostmaths.com/ |
| **Resources** | 5. https://www.examsolutions.net/ |

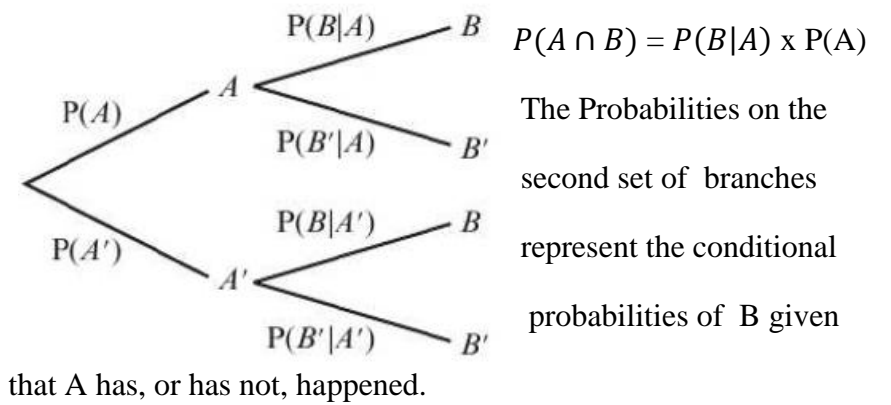| | |
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| **Lessons 3 –Live Zoom lesson** | Book 2<br>Chapter 2:<br>2.4 – Probability Formulae<br><br>**Learning objective** – To use probability formulae to solve problems<br><br>**Intended Learning Outcomes**<br><br>--Students will be able to use Probability formula for two events that links the probability of the union and the probability of the intersection. If P(A) = a, P(B) = b and $P(A \cap B)$ is i, then<br>$P(A \cup B) = (a - i) + (b - i) + i$<br>$\qquad\qquad = a + b - i$<br>Since i = $P(A \cap B)$ you can write the following addition formula for two events A and B: $P(A \cup B) = P(A) + P(B) - P(A \cap B)$<br>To find $P(B|A)$ restrict the sample space to the set of outcomes in which A has already occurred. If P(A) = a and $P(A \cap B)$ is i, then<br>$P(B|A) = \dfrac{i}{(a-i)+i} = \dfrac{i}{a}$. Since $P(B \cap A)$ is i and P(A) = a, we can write the multiplication formula for conditional probability as<br>$P(B|A) = \dfrac{P(B \cap A)}{P(A)}$. So $P(B \cap A) = P(B|A)$ x P(A)<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. |
| **Tasks** | |
| **Resource** | 1. Power point presentation<br>2. Statistics and Mechanics Year 2<br>3. https://www.physicsandmathstutor.com/<br>4. https://www.drfrostmaths.com/<br>5. https://www.examsolutions.net/a-levelmaths/edexcel/edexcel-a-level-maths-past-papers/ |
| **Lessons 4 –Live Zoom lesson** | Book 2<br>Chapter 2:<br>2.5 – Tree Diagrams<br><br>**Learning objective** – To solve conditional probability using tree diagrams.<br><br>**Intended Learning Outcomes**<br><br>--Students will be able to understand that conditional probability can be represented on a tree diagram.<br><br><br><br>that A has, or has not, happened. |

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| **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. |
| **Resource** | 1. Power point presentation<br>2. Statistics and Mechanics Year 2<br>3. https://www.physicsandmathstutor.com/<br>**4.** https://www.drfrostmaths.com/<br>**5.** https://www.examsolutions.net/a-levelmaths/edexcel/edexcel-a-level-maths-past-papers/ |
| **Lessons 5 –Live Zoom lesson** | Book 2<br>Chapter 2: Mixed Exercise<br><br>**Learning objective** – To solve problems on conditional probability.<br><br>**Intended Learning Outcomes**<br><br>--Students will be able to understand the concepts taught in Conditional probability and can solve problems from mixed exercise, page 34. |
| **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. |
| **Resource** | 1. Power point presentation<br>2. Statistics and Mechanics Year 2<br>3. https://www.physicsandmathstutor.com/<br>4. https://www.drfrostmaths.com/<br>5. https://www.examsolutions.net/a-levelmaths/edexcel/edexcel-a-level-maths-past-papers/ |
| **Lessons 6 –Live Zoom lesson** | **To do problems involving Integration.**<br><br>**Intended Learning Outcome:**<br><br>**By the end of the lesson students will be able to do problems from the Mixed exercise – Chapter 13 (integration). Pages 306 - 307. (Questions 6,7,12,13,14)** |
| **Tasks** | **Work will be assigned in Google Classroom.** |
| **Resource** | **Text Book :** Pure Mathematics Year 1 / AS |