YEAR 12 – MATHEMATICS (Week 3)

Subject	**Mathematics(Pure Math &Stat)**
Class/ Section	**Year 12 – Batch 1, 2 and 3**
Week	**13th September to 17th September 2020**
Work send to students by	**Group email / Google classroom / Zoom**
Total number of lessons per week	**6**
Units	**PURE MATH- Ch 3(Equations and inequalities), Ch 4(Graphs and transformations)** **3.7 – Regions** **4.1 – Cubic graphs** **4.2 –Quadratic graphs** **STATISTICS – Ch 1 (Data Collection)**
Lessons 1 –Live Zoom lesson	**Ch 3(Equations and inequalities),3.7 – Regions** **Ch 4(Graphs and transformations) 4.1 – Cubic graphs** **Learning objective**–Use shading on graphs to identify that satisfy linear and quadratic inequalities. –To sketch the graph of a cubic function **Intended Learning Outcomes** -Students will be able to use shading on graphs to identify that satisfy linear and quadratic inequalities.

Tasks **Resources**	Students will be able to. sketch cubic graph by finding the roots of the function. 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. 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/
Lessons 2 –Live Zoom lesson **Tasks** **Resources**	**Ch 4(Graphs and transformations)** **4.2 – Quadratic graphs** **Learning objective**–To sketch the graph of a quadratic function **Intended Learning Outcomes**- Students will be able to. sketch quadratic graph by finding the roots of the function. 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. 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/
Lessons 3 –Live Zoom lesson	**1.1 – Populations and samples** **1.2 – Sampling** **Learning objective – To understand 'population', 'sample' and census and comment on the advantages and disadvantages of each.** **To understand the advantages and disadvantages of simple random sampling, systematic sampling and stratified sampling.** **Intended Learning Outcomes** --Students will be able to • Understand the methods of data collection and to use them in making conclusions about the respective area of study. • Know what is census and sample and its use in real life.

Tasks **Resources**	• Decide the most suitable sampling method and to use the data for further calculations. 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. 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/
Lessons 4 –Live Zoom lesson **Tasks** **Resource**	**1.3 – Non random sampling** **1.4 – Types of data** **Learning objective – To understand the advantages and disadvantages of quota sampling and opportunity sampling.** **Intended Learning Outcomes** --Students will be able to • Understand the need non random sampling • Decide which non random sampling method to be used. • Are these sampling methods reliable and in what situations? 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. 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/
Lessons 5 –Live Zoom lesson	**1.5 – The large data set** **Learning objective – To understand the large data set and how to collect data from it. Identify types of data and calculate simple statistics.** **Intended Learning Outcomes** --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. -- 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

Tasks **Resource**	from the Large data set provided by Edexcel. The relevant extract from the data set will be provided. 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. 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/
Lesson 6 – Google classroom	**Assessment in pure math for 20 marks.** **Questions are assigned in Google classroom and students are monitored in Zoom.**