YEAR 12 – MATHEMATICS (Week 8)

Subject	Mathematics (Pure Math &Stat)
Class/ Section	Year 12 – Batch 1, 2 and 3
Week	18 th October to 22 nd October 2020
Work send to students by	Group email / Google classroom / Zoom
Total number of lessons per week	6
	PURE MATH- Ch 6 (CIRCLES)
	6.1 Midpoints and perpendicular bisectors 6.2 Equation of a circle
	6.3 Intersecting of straight lines and circles
Units	6.4 Use tangent and chord properties.
	6.5 circles and triangles
	STATISTICS – Ch. 3 (Representations of data)
	3.3 – Cumulative Frequency
	3.4 – Histograms 3.5 – Comparing Data
Lessons 1 –Live Zoom lesson	Ch 6 (CIRCLES)
	 6.1 Midpoints and perpendicular bisector. 6.2 Equation of a circle Learning objective - To find midpoint of a line segment, equation of
	the perpendicular bisector to a line segment and equation of a circle.
	Intended Learning Outcomes - Students will be able to find the
	midpoint of a line segment by averaging the x and y coordinates of its end points. The perpendicular bisector of a line B is the straight line that is perpendicular to AB and passes through the midpoint of AB.
	-Students will be able to derive equations of circles on a coordinate grid.
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.
Degeumeer	1. Power point presentation
Resources	2. Pure Mathematics Year 1 / AS
	3. <u>https://www.physicsandmathstutor.com/</u>
	4. <u>https://www.drfrostmaths.com/</u>
	5. <u>https://www.examsolutions.net/</u>

Lesson 2–Live Zoom lesson	6.3 Intersecting of straight lines and circles
	6.4 Use tangent and chord properties.
	<u>Learning objective</u> - To find the coordinates of intersection of a straight line and a circles and To use the tangent and chord properties
	<u>Intended Learning Outcomes</u> - Students will be able To find the coordinates of intersection of a straight line and a circle. To use the properties of tangents and chords within circles to solve geometric problems.
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
RESOULCES	2. Pure Mathematics Year 1 / AS
	3. <u>https://www.physicsandmathstutor.com/</u>
	4. <u>https://www.drfrostmaths.com/</u>
	5. <u>https://www.examsolutions.net/</u>
Lesson 3–Live Zoom lesson	6.5 circles and triangles
	Learning objective - To find the angle in a semicircle and solve problems involving circles and triangles.
	problems involving circles and triangles. <u>Intended Learning Outcomes</u> - Students will be able To find the angle in a semicircle and solve problems involving circles and triangles .To find the centre of a circle given any three points on the
Tasks	 problems involving circles and triangles. <u>Intended Learning Outcomes</u> - Students will be able To find the angle in a semicircle and solve problems involving circles and triangles .To find the centre of a circle given any three points on the circumference Find the equations of the perpendicular bisectors of two different chords. Find the coordinates of the points of intersection of the
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Lessons 4 –Live Zoom lesson	 3.3 – Cumulative Frequency 3.4 – Histograms <u>Learning objective</u> – To draw and interpret cumulative frequency diagrams and histograms.
	Intended Learning Outcomes
	Students will be able to know that is you are given data in a grouped frequency table, you are not able to find the exact values of the median and quartiles. You can draw a cumulative frequency diagram and use it to help find estimates for the median, quartiles and percentiles.
	Students will be able to represent Grouped continuous data in a histogram . On a histogram, to calculate the height of each bar (the frequency density) use the formula, area of bar = k x frequency. $k = 1$ is the easiest value to use when drawing a histogram. If $k = 1$, then frequency density = frequency / class width. Joining the middle of the top of each bar in a histogram forms a frequency polygon.
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	 Power point presentation Statistics and Mechanics Year 1 / AS <u>https://www.physicsandmathstutor.com/</u> <u>https://www.drfrostmaths.com/</u> <u>https://www.examsolutions.net/a-level-</u> maths/edexcel/edexcel-a-level-maths-past-papers/
Lessons 5 –Live Zoom lesson	3.5 – Comparing Data
	Learning objective – To compare two data sets.
	Intended Learning Outcomes
	Students will be able to comment on a measure of location and a measure of spread when comparing data sets. We can compare data using the mean and standard deviation or using the median and interquartile range. If the data set contains extreme values, then the median and interquartile range are more appropriate statistics to use.
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	 Power point presentation Statistics and Mechanics Year 1 / AS <u>https://www.physicsandmathstutor.com/</u> <u>https://www.drfrostmaths.com/</u> <u>https://www.examsolutions.net/a-level-maths/edexcel/edexcel-a-level-maths-past-papers/</u>

Lessons 6	To do problems involving Measures of Location and spread.
Google Classroom	Intended Learning Outcome:
	By the end of the lesson students will be able to do the problems from the Review exercise –1 based on chapters 1 (Data Collection and 2 (Measures of Location and spread).
Task	Work will be assigned in Google Classroom.
Resources	Text Book : Statistics and Mechanics Year 1 / AS