YEAR 12 – MATHEMATICS (Week 12)

Subject	Mathematics (Pure Math &Stat)
Class/ Section	Year 12 – Batch 1, 2 and 3
Week	15 th November – 19 th November 2020
Work send to students by	Group email / Google classroom / Zoom
Total number of lessons per week	6
Units	PURE MATH- Ch 8(The binomial expansion) 8.1 Pascal's triangle 8.2 Factorial notation 8.3 The binomial expansion 8.4 Solving binomial problems STATISTICS – Ch 6(Statistical distributions) 6.1 Probability distributions 6.2 The binomial distribution
Lessons 1 –Live Zoom lesson	PURE MATH- Ch 8(The binomial expansion)8.1 Pascal's triangle8.2 Factorial notationLearning objective: To use Pascal's triangle to identify binomialcoefficients and use them to expand simple binomial expressions .Students will be able to use combinations and factorial notation.Intended Learning Outcomes- Students will be able to use factorial notation to expandsimple binomial expression.Students will be able to use factorial notation to expand binomialexpressions for larger indices .
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	 Power point presentation Pure Mathematics Year 1 / AS <u>https://www.physicsandmathstutor.com/</u> <u>https://www.drfrostmaths.com/</u> <u>https://www.examsolutions.net/</u>

Lesson 2 - Live Zoom lesson	PURE MATH- Ch 8(The binomial expansion)
	8.3 The binomial expansion
	Learning objective - To use binomial expansion to expand brackets.
	Intended Learning Outcomes – Students will be able to use binomial expansion to expand powers of binomial expressions.
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	 Power point presentation Pure Mathematics Year 1 / AS <u>https://www.physicsandmathstutor.com/</u> <u>https://www.drfrostmaths.com/</u> <u>https://www.examsolutions.net/</u>
Lessons 3 - Live Zoom lesson	PURE MATH- Ch 8(The binomial expansion)
	8.4 Solving binomial problems
	Learning objective - To find individual coefficients in a binomial expansion.
	<u>Intended Learning Outcomes</u> – Students will be able to use the general term of the binomial expansion to find individual coefficients in a binomial expansion.
Task	To complete the questions assigned from the Textbook (pdf) in their notebook. Students will be put in break out rooms during Zoom
Resources	lesson to encourage collaborative learning.
	 Power point presentation Pure Mathematics Year 1 / AS <u>https://www.physicsandmathstutor.com/</u> <u>https://www.drfrostmaths.com/</u> <u>https://www.examsolutions.net/</u>
Lossons A. Livo Zoom losson	6 1 Probability distributions
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	Learning objective – To Understand and use simple discrete probability distributions including the discrete uniform distribution.
	Intended Learning Outcomes
	Students will be able to understand that a random variable whose value depends on the outcome of a random event. The range of values that a random variable can take is called its sample space.

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
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	1 Power point presentation
	2 Statistics and Mechanics Year 1 / AS
Resource	3 https://www.physicsandmathstutor.com/
	1 https://www.drfrostmaths.com/
	5 https://www.armostinains.com/
	5. <u>Inteps.//www.examsolutions.net/a-level-</u>
	<u>Inamis/edexcel/edexcel-a-revel-mains-past-papers/</u>
Lessons 5 –Live Zoom lesson	0.2 The binomial distribution
	Learning chiesting. To understand the highwish distribution as a
	<u>Learning objective</u> – To understand the binomial distribution as a
	model and comment on appropriateness.
	Intended Learning Outcomes
	Students will be able to model a random variable X with a
	binomial distribution, $B(n,p)$ if: there are a fixed number of trials, n;
	there are two possible outcomes (success and failure); there is a
	fixed probability of success, p and the trials are independent of each
Tasks	other.
	Students will be able to understand that a random variable X has
	the binomial distribution $B(n,p)$ then its probability mass function is
	given by $P(X = r) = (n, r) p^{r} (1-p)^{n-r}$, n is sometimes called the index
	and p is sometimes called the parameter.
Resource	
	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
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	1 Power point presentation
	2 Statistics and Mechanics Year 1 / AS
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	J. <u>https://www.czallisolutions.fict/a-icvci-</u> maths/aday.cal/aday.cal a level maths past papars/
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Lessons o -Live Zoom lesson	To do problems involving Measures of Location and spread.
	Intended Learning Outcome
	Intenueu Learning Outcome.
	By the end of the lesson students will be able to do problems
	from the Mixed evening Chanter 5 (Drabability) Dages 00 4
	nom me wixed exercise – Chapter 5 (Probability). Pages 80 to
	82. Questions:4, 5, 7, 9 and 11
Tasks	Work will be aggigned in Caagle Claggreene
	work will be assigned in Google Classroom.
Resource	1 Text Book • Statistics and Mechanics Vear 1 / AS
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