



**Skills, Knowledge and Understanding to be developed:**

- Students will develop their Statistical **SKILLS**.
- Students will use their **KNOWLEDGE** of Conditional Probability & Statistical Hypothesis Testing.
- Students will demonstrate their **UNDERSTANDING** by answering a range of exam style questions.

<p><b>Week 1 &amp; 2 - Learning Outcomes:</b>  <u>Conditional Probability: (3 hours)</u>  <b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>✓ Understand and use conditional probability, including the use of tree diagrams, Venn diagrams and two-way tables.</li> <li>✓ Understand and use the conditional probability formula  <math display="block">P(A \cap B) = P(A)P(B A) = P(B)P(A B)</math></li> <li>✓ Modelling with probability, including critiquing assumptions made and the likely effect of more realistic assumptions.</li> </ul> <p><u>Worksheets:</u>  <b>1.1. Conditional Probability in Two Way Tables</b>  <b>1.2. Conditional Probability in Venn Diagrams</b>  <b>1.3. Conditional Probability in Tree Diagrams</b></p>		<p><b><u>Success Criteria / Independent Study</u></b></p> <p>Students will be able to answer exam style questions on <u>conditional probability</u> independently.</p>	<p><b><u>Homework</u></b></p> <p><b>HW1: Conditional Probability (25 marks)</b></p>
<p><b>Week 3 &amp; 4 - Learning Outcomes:</b>  <u>Statistical Distributions: (3 hours)</u>  <b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>✓ Understand and use the continuous uniform distribution and Normal distributions as models.</li> <li>✓ Find probabilities using the Normal distribution.</li> </ul> <p><u>Worksheets:</u>  <b>2.1. The Continuous Uniform Distribution</b>  <b>2.2. The Normal Distribution – Calculating Probabilities</b></p>		<p><b><u>Success Criteria / Independent Study</u></b></p> <p>Students will be able to answer exam style questions on <u>statistical distributions</u> independently.</p>	<p><b><u>Homework</u></b></p> <p><b>HW2: Continuous Uniform Distribution (17 marks)</b></p>
<p><b>Week 5 &amp; 6 Learning Outcomes:</b>  <u>Statistical Distributions: (3 hours)</u>  <b>Students will be able to:</b></p> <ul style="list-style-type: none"> <li>✓ Link to histograms, mean, standard deviation, points of inflection and the binomial distribution.</li> <li>✓ Select an appropriate probability distribution for a context, with appropriate reasoning, including recognising when the continuous uniform or Normal model may not be appropriate.</li> </ul> <p><u>Worksheets:</u>  <b>2.3. The Normal Distribution – The Inverse Function</b>  <b>2.4. The Normal Distribution – Mean and Standard Deviation</b>  <b>2.5. Approximating the Binomial Distribution</b>  <b>2.6. Selecting and Appropriate Distribution</b></p>		<p><b><u>Success Criteria / Independent Study</u></b></p> <p>Students will be able to answer exam style questions on <u>statistical distributions</u> independently.</p>	<p><b><u>Homework</u></b></p> <p><b>HW3: The Normal Distribution (32 marks)</b></p>

