











<p><b>6<sup>th</sup> Form Preparation work for A Level Maths (External Students)</b></p> <p><b>Week 1 and 2</b></p>	 <p><b>Write</b> about why you have chosen to continue to study Maths into A Level. Consider why Maths is a passion but also how it impacts on your choices at university and in your future career.</p> <p><i>Time: 30 minutes</i></p>	 <p><b>Complete</b> the worksheets 1b on factorising, solving and sketching quadratics. Make notes as you answer them of any rules you already know and those you research.</p> <p><a href="#">Worksheet 1b1 - Worksheet 1b2</a> <a href="#">Worksheet 1b3 - Worksheet 1b4</a></p> <p><i>Time: 90 minutes</i></p>	 <p><b>Read</b> the article about the Eight Great Technologies. Choose one of the technologies to find out more about and how Maths is at the heart of it.</p> <p>Extension: Write a short report about the technology you have chosen.</p> <p><a href="#">The Eight Great Technologies</a></p> <p><i>Time: 1 hour</i></p>
 <p><b>Complete</b> a Thinking Hard Task to reduce the specification for the Pure Maths content of the A Level. Make a mind map to show the different topics from page 15 to 32. Extension: Start to add subject detail under the areas using knowledge from GCSE.</p> <p><a href="#">Edexcel Maths Specification</a></p> <p><i>Time: 1 hour</i></p>	 <p><b>Read</b> the article on how to resolve the Premier League. The season will be played out behind closed doors from late June but with many leagues around Europe voting to end their seasons early, Plus Magazine looks at how this could be done fairly using different mathematical calculations. Write a short report on your favoured method and why.</p> <p><a href="#">How to Resolve the Premier League</a></p> <p><i>Time: 1 hour</i></p>	 <p><b>Watch</b> 'How to get Lucky'. The Royal Institution of Great Britain runs a series of lectures every Christmas by someone distinguished in their field. Several times the lectures have been delivered by a Mathematician and last year was one of those. These are interactive and really interesting! The Title of the lecture series was Secrets and Lies and the first is called How to Get Lucky. It's all about Probability.</p> <p><a href="#">RI Christmas Lecture</a></p> <p><i>Time: 1 hour</i></p>	 <p><b>Complete</b> the worksheets 1c on simultaneous equations. Make notes as you answer them of any rules you already know and those you research.</p> <p><a href="#">Worksheet 1c1 - Worksheet 1c2</a> <a href="#">Worksheet 1c3</a></p> <p><i>Time: 1 hour</i></p>
 <p><b>Watch</b> the tour of the Maths Gallery at the Science Museum. Pick three of the ten objects featured and research them writing a short report about them.</p> <p><a href="#">Maths at the Science Museum</a></p> <p><i>Time: 1 hour</i></p>	 <p><b>Complete</b> the worksheets 1a on Expanding Brackets, Surds and the Rules of Indices. Make notes as you answer them of any rules you already know and those you research.</p> <p><a href="#">Worksheet 1a1 - Worksheet 1a2</a> <a href="#">Worksheet 1a3</a></p> <p><i>Time: 1 hour</i></p>	 <p><b>Listen</b> to the Podcast. A gigantic scientific effort called the Physiome Project is about piecing together a mathematical description of the entire physiology of the human body. Once this has been achieved to a sufficient level digital twins will be a spin-off. Write a list of the words in the clip that you do not understand and research.</p> <p><a href="#">Meet Your Digital Twin</a></p> <p><i>Time: 30 minutes</i></p>	