

YEAR 13 – MATHEMATICS (Week 4)

Subject	Mathematics
Class/ Section	Year 13 – Batch A, B and C
Week	19th September to 23rd September 2021
Work send to students by	Group email / Google classroom / Zoom
Total number of lessons per week	3
Units	Pure Mathematics – Year 2 Chapter 3 – Sequences and Series
Lessons 1 –Live Zoom lesson	3.3 – Geometric Sequences 3.4 – Geometric Series
Tasks/Activities	<p><u>Learning objective</u> – To find the n^{th} term of a geometric sequence and to prove and use the formula for the sum of a finite geometric series.</p> <p><u>Intended Learning Outcomes</u></p> <p>--Students will be able to understand that a geometric sequence has a common ratio between consecutive terms and how to find the formula for the n^{th} term of a geometric sequence.</p> <p>--Students will be able to understand that a geometric series is the sum of the terms of a geometric sequence and how to find the formula for the sum of the first n terms of a geometric series.</p> <p>The Teacher would recall Geometric sequences and will make students to understand about the Geometric series. Students will explore more examples and the implementation of Geometric series in real life.</p>
Lessons 2 –Live Zoom lesson	3.5 – Sum to Infinity 3.6 – Sigma Notation
Tasks/Activities	<p><u>Learning objective</u> – To prove and use the formula for the sum to infinity of a convergent geometric series and to use sigma notation to describe series.</p> <p><u>Intended Learning Outcomes</u></p> <p>--Students will be able to work out the sum of n terms of geometric series. As n tends to infinity, the sum of the series is called the sum to infinity. Students will understand that as a series getting bigger, as n tends to infinity, S_n also tends to infinity and this series is called divergent series. As a series gets smaller, as n tends to infinity, S_n gets closer and closer to a finite value, S_{infinity} and this is called convergent series. Students will be made to understand that the Greek capital letter sigma is used to signify a sum. We write the limits on top and bottom to show which terms you are summing.</p> <p>The Teacher would introduce the concept of convergent and divergent series and will make students to understand about the sum to infinity. Students will explore more examples and the implementation of sum to infinity and sigma sign in real life.</p>

