

YEAR 12 – MATHEMATICS (Week 2)

Subject	Mathematics
Class/ Section	Year 12 – Batch A, B and C
Week	29th March to 2nd April
Work send to students by	Group email / Google classroom / Zoom
Total number of lessons per week	6
Units	14.1 – Exponential Functions 14.2 – $y = e^x$ 14.3 – Exponential Modelling 14.4 – Logarithms 14.5 – Laws of logarithms 14.6 – Solving equations using logarithms
Lessons 1 & 2	14.1 – Exponential Functions 14.2 – $y = e^x$
Task	Learning objective – (i) To sketch graphs of the form $y = a^x$, $y = e^x$ and transformations of these graphs. (ii) To differentiate e^{kx} and understand why this result is important.
Resources	Complete the textbook and worksheet questions in the notebook. <ol style="list-style-type: none">1. Power point presentation2. Pure Math Year 1 / AS3. https://www.physicsandmathstutor.com/4. https://teachers.henrico.k12.va.us/math/HCPSAlgebra2/Documents/10-1/2006_10_1.ppt5. https://www.mesacc.edu/~scotz47781/mat120/notes/exponential/graphing/graph_exp_intro.pdf6. https://www.youtube.com/watch?v=UQMa5ZSxoYc

	<p>7. https://www.youtube.com/watch?v=6WMZ7J0wwMI</p> <p>8. https://www.slideshare.net/JJkedst/the-exponential-and-natural-log-functions</p>
<p>Lesson 3 & 4</p> <p>Task</p> <p>Resource</p>	<p>14.3 – Exponential Modelling 14.4 – Logarithms</p> <p>Learning objective – (i) To use and interpret models that use exponential functions (ii) To recognise the relationship between exponents and logarithms.</p> <p>Complete the textbook and worksheet questions in the notebook.</p> <p>Assessment on Differentiation</p> <ol style="list-style-type: none"> 1. Power point presentation 2. Pure Math Year 1 / AS 3. https://www.physicsandmathstutor.com/ 4. https://studywell.com/maths/pure-maths/exponential-logarithmic-functions/growth-and-decay/ 5. https://www.khanacademy.org/math/algebra2/x2ec2f6f830c9fb89:logs/x2ec2f6f830c9fb89:exp-models/v/solving-exponential-model-word-problems-1 6. https://www.alamo.edu/contentassets/afe30946fa58450c89840c1173f3b9d0/exponential/math1314-exponential-equations-base-e.pdf 7. https://youtu.be/n2tohOIeKYw 8. https://teachers.henrico.k12.va.us/math/HCPAlgebra2/Documents/10-2/2006_10_2.ppt
<p>Lessons 5 & 6</p> <p>Task</p> <p>Resources</p>	<p>14.5 – Laws of logarithms 14.6 – Solving equations using logarithms</p> <p>Learning objective – (i) To recall and apply the laws of logarithm (ii) To solve equations of the form $a^x = b$</p> <p>Complete the textbook and worksheet questions in the notebook.</p> <ol style="list-style-type: none"> 1. Power point presentation 2. Pure Math Year 1 / AS 3. https://www.physicsandmathstutor.com/ 4. https://studywell.com/wp-

<content/uploads/2018/03/SolomonDecayQuestions.pdf>

5. <https://studywell.com/wp->

<content/uploads/2018/03/SolomonDecaySolutions.pdf>

6. <https://youtu.be/-8K1nNNb3zQ>

7. <https://youtu.be/ofw47dK47Js>

8. [https://pmt.physicsandmathstutor.com/download/Maths/A-](https://pmt.physicsandmathstutor.com/download/Maths/A-level/C2/Topic-Qs/Edexcel-Set-)
[level/C2/Topic-Qs/Edexcel-Set-](https://pmt.physicsandmathstutor.com/download/Maths/A-level/C2/Topic-Qs/Edexcel-Set-)

[1/C2%20%20Exponentials%20and%20logs%20-](https://pmt.physicsandmathstutor.com/download/Maths/A-level/C2/Topic-Qs/Edexcel-Set-1/C2%20%20Exponentials%20and%20logs%20-)

[%20Exponential%20equations.pdf](https://pmt.physicsandmathstutor.com/download/Maths/A-level/C2/Topic-Qs/Edexcel-Set-1/C2%20%20Exponentials%20and%20logs%20-%20Exponential%20equations.pdf)

9. <https://youtu.be/23el04fJ8Ww>