

A level Maths & Further Maths Induction Work: Phase 1

Welcome to the Hardenhuish A level Maths and Further Maths induction work. The induction work is based on key GCSE topics, mainly algebraic, that will be the foundations of the mathematics you will meet in September.

All these topics should be familiar but there will be some interesting approaches and applications that you might not have seen before. Please work through each topic section listed, you will need a paper and pen to write down your working. This short video outlines the structure of the sections detailed below <https://youtu.be/NP0NhAgSMk8>

If there are any topics you would like a reminder on then a MyMaths location is given www.mymaths.co.uk Please email [Mrs Cobb](mailto:Mrs.Cobb) if you need the login and password.

Maths Students

You should complete the essential **skills checks** and spend time doing the **practice** and **explore** questions, we suggest a minimum of 45 minutes for each section. Although additional time may be spent to complete all the tasks if you wish. Once complete, please work through the online check in quiz (details below).

Further Maths Students

Further Mathematicians should complete all of the tasks within each section and also explore the *Still Want More* activities, spending around 90 minutes on each section. Once complete, please work through the online check in quiz (details below).

Topic Sections:

- Fractions https://amsp.org.uk/uploads/files/Simplifying-Fractionsv1_7.pdf
(MyMaths – Number, Fractions)
- Indices <https://amsp.org.uk/uploads/files/indices-presentation.pdf>
(MyMaths – Number, Powers and Roots – Indices 1-4)
- Surds https://amsp.org.uk/uploads/files/Simplifying-Surdsv1_6.pdf
(MyMaths – Number, Powers and Roots – Surds 1-2)
- Expanding <https://amsp.org.uk/uploads/files/Expanding.pdf>
(MyMaths – Algebra, Algebraic Manipulation, Single Brackets)
- Double Brackets <https://amsp.org.uk/uploads/files/Double-bracketsv2.pdf>
(MyMaths – Algebra, Algebraic Manipulation, Brackets)
- More Brackets <https://amsp.org.uk/uploads/files/More-bracketsv2.pdf>
(MyMaths – Algebra, Algebraic Manipulation, Expanding Three Binomials)

After working through the sections above please complete the short online check in quiz, linked below, by **Monday 21st June**.

<https://forms.office.com/Pages/ResponsePage.aspx?id=ALV0CGtJAKCS-T05uDMt-g9hj1h1AxdIo539Q2A2teFUMUg0NUNTSIJasIQ5VkhHU0NESTA0RUZJOS4u>

Suggested reading and mathematical apps/games

Please note that these are not compulsory, but if you are planning to study A level maths it is reasonable to assume you are interested in the subject!

- Sumaze – maths puzzle game, free Windows/Apple app
- Why Do Buses Come In Threes? (Rob Eastaway and Jeremy Wyndham)
- Humble Pi: A Comedy of Maths Errors (Matt Parker)
- The Num8er My5teries (Marcus du Sautoy)
- How Not To Be Wrong (Jordan Ellenberg)

If you read any of the books above, or any of the other excellent mathematical books available, we'd love to hear your thoughts (or recommendations) in September!

If you have completed all the work listed above and are still keen for more to prepare for next year then you may wish to explore the online Year 11 to 12 transition course from the AMSP. This is optional and students can sign themselves up using the link here https://2017.integralmaths.org/management/self_reg_students.php

If you have any questions, or need the login for MyMaths, please email...

Mrs Cobb – rxo@hardenhuish.wilts.sch.uk or Mr Cobb - pxc@hardenhuish.wilts.sch.uk
Lead Teachers for Key Stage 5 Mathematics