# WHGS Sixth Form

## Mathematics

**William Hulme's Grammar School**
The best in everyone™
Part of United Learning

## Summer Focus

Given the complexity of this course it is imperative that you carry out some preparatory work over the summer to ensure you have the required skills to ensure a smooth transition and enable you to make a success of A Level mathematics.

We are looking to give you every chance to prepare in a structured way and so we have 3 sets of resources.

## Firstly:

We have some excellent "Sparx" Questions and Answers to secure your knowledge and to ensure you do not start at a disadvantage:

Questions : www.whgs-academy.org/Portals/0/SixthForm/Transition/Sparx Maths.pdf
Answers : www.whgs-academy.org/Portals/0/SixthForm/Transition/Sparx Maths Answers.pdf

## Secondly:

We would ask you to follow the course on amsp (Advanced Maths Support Programme) website:
amsp.org.uk/resource/gcse-alevel-transition-resources

Listed below are seven essential skills.  It is expected that when you join us in September, you have a solid understanding of these.  The links provide a reference document which includes examples and practice questions on that particular skill:

1.      To use and understand the rules of indices:
        www.mathcentre.ac.uk/resources/uploaded/mc-ty-indicespowers-2009-1.pdf

2.      Be able to expand brackets and simplify:
        www.mathcentre.ac.uk/resources/Algebra%20leaflets/mc-expandbrack-2009-1.pdf

3.      Be able to solve linear equations:
        www.mathcentre.ac.uk/resources/uploaded/mc-bus-lineqn-2009-1.pdf

4.      Be able to solve simultaneous equation (elimination and substitution method):
        www.mathcentre.ac.uk/resources/uploaded/mc-ty-simultaneous-2009-1.pdf

5.      Be able to solve quadratic equations (factorising, quadratic formula and completing the square)
        a)      www.mathcentre.ac.uk/resources/uploaded/mc-ty-factorisingquadratics-2009-1.pdf
        b)      www.mathcentre.ac.uk/resources/uploaded/mc-ty-quadeqns-2009-1.pdf
        c)      www.mathcentre.ac.uk/resources/uploaded/mc-ty-completingsquare1-2009-1.pdf

6.      Be able to rearrange formulae:
        www.mathcentre.ac.uk/resources/uploaded/mc-ty-transposition-2009-1.pdf

7.      Be comfortable with surds and rationalising the denominator:
        www.mathcentre.ac.uk/resources/uploaded/mc-ty-surds-2009-1.pdf

The school also subscribes to Hegarty Maths, where Mr Hegarty is running regular live Transition lessons which are saved as recordings: www.youtube.com/user/HEGARTYMATHS/live

Also, to look at the A Level course and get a lead on your learning, we use Integral Maths: integralmaths.org
(If you do not have a login for Integral, please contact Mr J A Harrison, Head of Maths Faculty, at andrew.harrison@whgs-academy.org).

**A Level Mathematics is one of the most complex and hence difficult A Levels to study, but with effort a top grade is achievable.  It is also one of the most respected A Levels in university applications.  We need to be confident that you will be able to cope with both the demands of the course and be capable of obtaining a result in your examinations at the end of the course.  Due to this, in your first term, we will be testing your confidence in the fundamentals, so studying the above topics is essential before you arrive.**