

# The Bridge to A level

# PiXL Y11 Maths

# Bridging Unit



This pack contains a programme of activities and resources to prepare you to start A-level in Maths in September.

It is aimed to be used after you complete your GCSE throughout the remainder of the summer term and over the summer holidays to ensure you are ready to start your course in September.

## The resources include:

1. Links to websites where you can research the topics you will be exploring in your sixth form courses and get a flavour of mathematics beyond GCSE.
2. 15 key pre-knowledge topics that will help you to be successful in your course. The topics covered are a mixture of GCSE topics, and topics which extend GCSE but which will be very useful on your A level course.
3. A diagnostic assessment that will test your key knowledge of these 15 topics.
4. Suggested therapies to help you with those topics with which you are having difficulty.
5. A second assessment which will test the effectiveness of your use of the therapies.
6. A bank of problem solving questions to accompany each of the 15 topics to test that you can apply the skills that you have learned.

## Websites

### **NRich**

<http://nrich.maths.org/secondary-upper>

### **Mathwire**

<http://mathwire.com/archives/enrichment.html>

### **The History of Maths – Wikipedia**

[https://en.wikipedia.org/wiki/History\\_of\\_mathematics](https://en.wikipedia.org/wiki/History_of_mathematics)

### **The History of Maths – Youtube video**

<https://www.youtube.com/watch?v=cy-8lPVKLlo>

## 15 key Topics

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| 1  | Solving quadratic equations                  |
| 2  | Changing the subject                         |
| 3  | Simultaneous equations                       |
| 4  | Surds  |
| 5  | Indices                                      |
| 6  | Properties of Lines                          |
| 7  | Sketching curves                             |
| 8  | Transformation of functions                  |
| 9  | Pythagoras' theorem and Trigonometric ratios |
| 10 | Sine / Cosine Rule                           |
| 11 | Inequalities                                 |
| 12 | Proof  |
| 13 | Vectors                                      |
| 14 | Probability                                  |
| 15 | Statistics                                   |