Subject	Mathematics – Higher tier		
Title/Topic	**Format**	**Length**	**WC**
Paper 1 - Non-Calculator	Written Paper	45 minutes	9th Nov
Paper 2 - Calculator Allowed	Written Paper	45 minutes	16th Nov

In this Advent assessment I will be asked to show I can…

You will sit **two assessment papers** in the Advent term. Each assessment will be of equal challenge, but they will progress in difficulty through the paper. They will test you on your understanding of the concepts studied so far in Year 10 – units 1 to 5.
These **core concepts** are listed below, but this is not an exclusive list as questions may draw on prior knowledge from years 7, 8 and 9. These can also be found in the Revision assessment booklet given to you by your Maths teacher.

Topic name	Sparx code
Algebra	
Simplifying expressions by collecting like terms	**U105**
Simplifying expressions using index laws	**U662**
Expanding single brackets	**U179**
Factorising into one bracket	**U365**
Solving equations with two or more steps	**U325**
Solving equations with the unknown on both sides	**U870**
Solving equations with the unknown in the denominator	**U505**
Constructing and solving equations	**U599**
Reading and drawing inequalities on number lines	**U509**
Solving single inequalities	**U759**
Solving inequalities with the unknown on both sides	**U738**
Changing the subjects of formulae with one step	**U675**
Changing the subjects of formulae with two or more steps	**U181**
Expanding double brackets	**U768**
Expanding triple brackets (Higher only)	**U606**
Factorising quadratic expressions of the form $x^2 + bx + c$	**U178**
Factorising the difference of two squares	**U963**
Factorising to solve quadratic equations of the form $x^2 + bx + c = 0$	**U228**
Completing the square (Higher only)	**U397**
Solving quadratic equations using the quadratic formula (Higher only)	**U665**
Percentages	
Finding percentages of amounts without a calculator	**U554**
Finding percentages of amounts with a calculator	**U349**
Percentage change without a calculator	**U773**
Percentage change with a calculator	**U671**
Writing numbers as percentages of other numbers	**U925**
Finding the percentage an amount has been changed by	**U278**
Finding original values in percentage calculations	**U286**
Simple interest calculations	**U533**
Compound interest calculations	**U332**
Ratio	
Writing and simplifying ratios	**U687**
Using equivalent ratios to find unknown amounts	**U753**
Sharing amounts in a given ratio	**U577**
Converting between ratios, fractions and percentages	**U176**
Combining ratios	**U921**
Calculating with ratios and algebra	**U676**
Drawing and interpreting scale diagrams	**U257**
Extension and Year 9 content	
Extend: Change the subject when it appears more than once	**U191**
Extend: Factorise more complex quadratics	**U858**
Extend: Factorise to solve more complex quadratics	**U960**
Year 9: Finding the volume of cones and spheres	**U426**

4

What should I do to revise and prepare for this assessment?

1. **Complete your revision workbook** that your teacher has provided you with. You should work through all the questions, checking your work using the answers provided. You could ask a parent or relative to check your work with you and discuss the areas you need to revisit. This revision workbook must be completed in full and handed in to your teacher for checking the day of your first assessment.
2. **Read carefully through your lesson notes** in each workbook. Look out for the key information that you have written down or highlighted that your teacher said was an important learning point.
3. **Study the knowledge organisers** for the units being tested. They can be found at the back of each of the workbooks that you have completed so far and also in your revision booklet. You should use the technique of **'look, cover, check'**

What useful websites/resources could I use to help me prepare?

www.sparxmaths.uk

- Use the Sparx codes that are listed here and in your revision booklet. You will need to go to the Independent learning section rather than homework on Sparx, Choose GCSE from the drop-down curriculum tab and choose level 4 (5 for more challenging questions). Good luck!