Trinity Academy Mathematics Department

Transition Work 2024 – A-Level

Below are a range of Sparx codes from key topics that you will have seen in GCSE and will be helpful for A-level.

Each topic has three sections:

- **Introduce** questions allow you to practise the key concepts.
- **Strengthen** questions build on your knowledge of the key concepts.
- **Deepen** questions will challenge your understanding.

We expect you to be able to complete the equivalent to one section before your first lesson in year 12. Unless otherwise indicated, you may use a calculator.
Use the grid below to keep track of your progress in each topic. Tick the sections you have attempted.

We look forward to working with you!

Topic	**Code**	**I**	**S**	**D**
Surds	U499: Expanding brackets with surds			
	U707: Rationalising denominators containing a single term			
	U281: Rationalising denominators containing two terms			
Expanding brackets	U768: Expanding double brackets			
	U606: Expanding triple brackets			
Factorising quadratics	U178: Factorising quadratic expressions of the form $x^2 + bx + c = 0$			
	U858: Factorising quadratic expressions of the form $ax^2 + bx + c = 0$			
Simplifying expressions	U662: Simplifying expressions using index laws			
	U437: Simplifying algebraic fractions by factorising into one bracket			
Operations with algebraic fractions	U685: Adding and subtracting algebraic fractions			
	U457: Multiplying algebraic fractions			
	U824: Dividing algebraic fractions			
Solving quadratic equations	U228: Factorising to solve quadratic equations of the form $x^2 + bx + c = 0$			
	U960: Factorising to solve quadratic equations of the form $ax^2 + bx + c = 0$			
	U665: Solving quadratic equations using the quadratic formula			
	U150: Constructing and solving quadratic equations			

Topic	Code	I	S	D
Quadratic graphs	U589: Solving quadratic equations by completing the square			
	U769: Finding the turning point of a quadratic graph by completing the square			
	U601: Solving quadratic equations graphically			
Linear simultaneous	U760: Solving simultaneous equations using elimination			
	U757: Solving simultaneous equations using substitution			
Straight-line graphs	U315: Finding equations of straight line graphs			
	U477: Finding the equation of a straight line from its gradient and a point			
	U848: Finding the equation of a straight line from two points on the line			
	U669: Interpreting equations of straight line graphs			
	U377: Equations of parallel lines			
	U898: Equations of parallel and perpendicular lines			
Right-angled trigonometry	U283: Finding unknown sides in right-angled triangles			
	U545: Finding unknown angles in right-angled triangles			
	U170: Trigonometry in 3D shapes			
Further trigonometry	U952: The sine rule			
	U591: The cosine rule			

If you require any help, remember that there are videos on Sparx that links to each code. You will also become very aware of a wonderful site called TLMaths next year as there are videos for every topic we will cover. There are some videos that will help with the above task here: TLMaths - GCSE to A-Level Maths Bridging the Gap