

Access to Higher Education Unit

This unit forms part of an Access to HE Diploma. If delivering the graded version of this unit, please refer to the Provider Handbook for details on grading descriptors and the application of these across units within your programme.

Unit Title: Introductory Algebra and Geometry

Graded Unit Reference Number: GA33MTH26

Ungraded Unit Reference Number: UA33MTH26

Module: Mathematics

Level: Three (3)

Credit Value: Three (3)

Minimum Guided Learning Hours: 30

Learning Outcome (The Learner will):	Assessment Criterion (The Learner can):
1. Understand number relationships involving indices and roots	1.1 Apply index laws to solve problems, including negative and fractional indices
	1.2 Apply surd laws to solve problems
2. Understand basic algebraic methods	2.1 Use expansion, factorisation, simplification to solve problems
	2.2 Solve a range of linear equations, including unknown on both sides and addition/subtraction of algebraic fractions
	2.3 Solve a pair of linear simultaneous equations
3. Understand how to use quadratics	3.1 Find the roots of a quadratic by factorising
	3.2 Find the roots of a quadratic by completing the square
	3.3 Find minima/maxima of a quadratic by completing the square
4. Understand the properties of straight lines	4.1 Solve 2D problems involving straight line graphs, their coordinates and equations

	4.2	Solve 2D problems involving perpendicular lines and their equations
5. Understand radians as a unit of angular measure	5.1	Use radians to solve problems involving arcs and sectors of circles
6. Understand basic trigonometry	6.1	Recall and use exact trigonometric values to solve problems (exact values for sin/cos/tan, for 0° , 30° , 45° , 60° , 90° and 0 , $\pi/6$, $\pi/4$, $\pi/3$, $\pi/2$ radians)
	6.2	Apply the trigonometric ratios sin/cos/tan to solve problems involving right-angled triangles
	6.3	Apply the sine rule/cosine rule/area sine rule to solve problems involving any triangle