

<b>Teacher(s)</b>	Y9 team	<b>Subject group and discipline</b>	Maths		
<b>Unit title</b>	2 Extending Multiplication	<b>MYP year</b>	3	<b>Unit duration (hrs)</b>	

### **Inquiry: Establishing the purpose of the unit**

<b>Key concept</b>	<b>Related concept(s)</b>	<b>Global context</b>
logic	<b>Generalise, representations</b>	personal and cultural expression: social constructions of reality
<b>Statement of inquiry</b>		
Using logic can help us generalise using multiplicative representations to construct the concept of irrational numbers.		
<b>Inquiry questions</b>		
<b>Factual – What is standard index form? How does it work? What is a surd? How can you simplify a surd?</b>		
<b>Conceptual— How can we represent very large or very small numbers easily? What does it mean when a number is raised to a fractional power? How does area represent multiplication?</b>		
<b>Debatable— Why is simplifying fractions and algebra important?</b>		
<b>Objectives</b>	<b>Summative assessment</b>	
Assessment 1: Criteria B i. select and apply mathematical problem-solving techniques to discover complex patterns ii. describe patterns as relationships and/or general rules consistent with findings iii. verify and justify relationships and/or general rules.	Assessment 1: Outline of summative assessment task(s) including assessment criteria: Students investigate which numbers can be represented as the difference of two squares. They use algebra and area models to explain why some can and some cannot.	Assessment !: Relationship between summative assessment task(s) and statement of inquiry: The use of square shapes and rectangles enables the concept of irrational square-roots to be identified

	<p>G To determine which numbers are possible to be written as the difference of two squares, and which cannot.</p> <p>R Student exploring</p> <p>A Fellow student</p> <p>S Exploring the patterns to try and find a generalisation</p> <p>P Short report of findings, patterns shown logically and pictorially as well as numerically</p> <p>S Criteria B</p>	in this investigation, which is harder than using algebra alone.
Assessment 2: (if used in the unit)	Assessment 2: (if used in the unit) Outline of summative assessment task(s) including assessment criteria:	Assessment 2: Relationship between summative assessment task(s) and statement of inquiry:
<b>Approaches to learning (ATL)</b>		
Communication skills: Negotiate ideas and knowledge with peers and teachers		

**Action: Teaching and learning through inquiry**

Lesson: UNIT 2 BLOCK 1 Lesson 1

Inquiry Question: **How can we represent very large or very small numbers easily?**