

KS3 Maths: Year 8 Key Skills & Concepts	Emerging	Developing	Securing	Mastering
1 Prime Factor Decomposition	<p>Can Identify Factors &amp; Multiples of integers</p> <p>Can give the definition of &amp; Identify Prime numbers</p>	<p>Can break a number down into its Prime factors through a factor tree</p> <p>Can list factors and multiples of smaller numbers to identify LCM &amp; HCF</p>	<p>Can use factor trees and Venn diagrams to calculate LCM and HCF.</p> <p>Can complete Venn diagrams given the LCM or HCF</p>	<p>Can identify large square numbers by using prime factor decomposition</p>
2 Negative numbers, Powers, Roots indices & Standard form	<p>Can calculate using the four rules of negative numbers</p> <p>Can multiply integers by powers of 10</p>	<p>Can identify and give solutions for basic squares, cubes and roots.</p> <p>Can change between SF and normal numbers</p>	<p>Can apply Index laws and use to collect like terms</p> <p>Can Multiply by both positive and negative powers of 10</p>	<p>Can adjust numbers presented as powers of 10 but not but not yet in SF to Standard form.</p>
3 Rounding and Order of operations	<p>Can round to a given decimal place</p> <p>Can recognise and apply the 4 basic calculations using BIDMAS</p>	<p>Can round to a given Significant figure</p> <p>Can use BIDMAS with indices and roots</p>	<p>Can use insert brackets using BIDMAS to make a solution true</p>	<p>Can identify bounds given already rounded numbers</p>
4 Four rules of whole numbers and decimals	<p>Can apply mental and written methods for basic addition and subtraction</p> <p>Can use written methods for basic addition and subtraction of decimals</p>	<p>Can multiply and divide whole numbers and decimals</p> <p>Can carry out greater than two operation sums where one number has decimals</p>	<p>Can multiply two numbers together where both have decimals</p> <p>Can solve a sum where the divisor is a decimal</p>	<p>Can solve worded problems where calculations with decimals are needed</p>
5 Perimeter & Area	<p>Can calculate the area of a rectangle and triangle</p> <p>Can define the characteristics of a Trapezium and a Parallelogram and find the Area given all needed info</p>	<p>Can calculate the area of compound shapes</p> <p>Can calculate the circumference and area of a circle given the diameter and radius for their relevant formulae</p>	<p>Can calculate area and perimeter of compound shapes including combination of circular and straight sided shapes</p> <p>Can solve worded problem solving questions on area and perimeter</p>	<p>Can work backwards and find the radius and diameter of circles given the circumference or area.</p> <p>Can find the area of partial circular shapes such as a tyre shaped circle.</p>
6 Expression & Formulae	<p>Identify algebraic labels such as terms, expression and equation</p> <p>Can collect like terms including with indices and negative numbers</p> <p>Multiply a single bracket by a number or letter</p>	<p>Can multiply more than one bracket by a number, letter or both and collect terms</p> <p>Can multiply 2 brackets together and collect like terms</p> <p>Can factorise basic 2 term expressions</p>	<p>Can factorise an expression with multiple terms with various given powers on the letters</p> <p>Can apply formulae given a worded problem or values of letters</p>	<p>Can write an expression or formulae given a diagram or a worded scenario</p>