

Levenshulme High School – Curriculum Map – Maths

		Term 1		Term 2		Term 3	
Topic Title and NC link		Probability, Measures, Fractions and Indices	Standard form, Rounding and Simultaneous Equations	Real life graphs, recap of angles and Trigonometry	Trigonometry continued and Circumference and area	Direct and Inverse proportion, FDP	Compound Percentages and Quadratics
Year 10 Foundation	<i>Pupils should know...</i>	<ul style="list-style-type: none"> <li>• What relative probability is</li> <li>• How to multiply and add fractions</li> <li>• When to use AND/OR rules</li> <li>• What compound units are</li> <li>• The difference between rational and irrational numbers</li> <li>• The effect of different powers on numbers</li> <li>• Recognise a need for really big and really small numbers</li> <li>• Measurements are accurate to a limited degree</li> </ul>	<ul style="list-style-type: none"> <li>• The effect of different powers on numbers</li> <li>• Recognise a need for really big and really small numbers</li> <li>• Measurements are accurate to a limited degree</li> <li>• How to find solutions that satisfy a set of rules</li> <li>• When and how to form simultaneous equations to solve a problem with two unknowns</li> </ul>	<ul style="list-style-type: none"> <li>• The concepts of ratio and that division is not commutative</li> <li>• In trigonometry corresponding sides are proportional</li> <li>• How to interpret a distance time graph</li> <li>• Know angles are a measure of turn</li> </ul>	<ul style="list-style-type: none"> <li>• In trigonometry corresponding sides are proportional</li> <li>• How to find area and circumference of a circle</li> <li>• What a composite shape is and be able to split this into known shapes to find the area</li> </ul>	<ul style="list-style-type: none"> <li>• That proportions compare one part to the whole whereas ratio compares one part to another part</li> <li>• The effect of multiplying a number by less than 1</li> <li>• The effect of multiplying a number by more than 1</li> </ul>	<ul style="list-style-type: none"> <li>• When and how to use and apply quadratic skills</li> <li>• A quadratic equation has up to two solutions</li> <li>• There are a choice of methods to use for solving</li> <li>• The quadratic formula</li> <li>• The effect of compound interest</li> </ul>
	<i>Pupils should be able to do...</i>	<ul style="list-style-type: none"> <li>• Find the probability of single events</li> <li>• Construct a tree diagram</li> <li>• Find independent and dependent probabilities from a tree diagram</li> </ul>	<ul style="list-style-type: none"> <li>• Calculate effectively with powers</li> <li>• Write in standard form</li> <li>• Calculate in standard form and change between standard form</li> </ul>	<ul style="list-style-type: none"> <li>• Plot graphs including reciprocal</li> <li>• Interpret graphs and gradients</li> <li>• Estimate using a graph</li> <li>• Use angle facts</li> </ul>	<ul style="list-style-type: none"> <li>• Recall the exact values of given trig ratios</li> <li>• Name parts of a circle</li> <li>• Recall the formula for the perimeter of a circle</li> </ul>	<ul style="list-style-type: none"> <li>• How to use direct proportion e.g. recipes and best buys</li> <li>• How to solve word problems involving</li> </ul>	<ul style="list-style-type: none"> <li>• Find compound interest</li> <li>• Use Wendy's way</li> <li>• Expand polynomials</li> </ul>

		<ul style="list-style-type: none"> <li>Use all four operations with fractions</li> <li>Solve problems involving compound measures</li> </ul>	<ul style="list-style-type: none"> <li>and ordinary numbers</li> <li>Solve simultaneous equations graphically and algebraically</li> <li>Round numbers to an appropriate degree of accuracy</li> </ul>	<ul style="list-style-type: none"> <li>Label a triangle</li> <li>Know the trig ratios</li> <li>Use the ratios to find unknown lengths</li> <li>Use the ratios to find unknown angles</li> </ul>	<ul style="list-style-type: none"> <li>Calculate the perimeter of 2D shapes including composite shapes</li> <li>Know the formula for the area of a circle</li> <li>Find the area of circles and composite shapes</li> <li>How to apply knowledge of area of circles and circumference to compound shapes and sectors</li> </ul>	<ul style="list-style-type: none"> <li>ratios using the unitary method</li> <li>% increase and decrease problems</li> <li>Original value problems</li> <li>Simple interest problems</li> </ul>	<ul style="list-style-type: none"> <li>Factorise quadratics and solve</li> <li>Complete the square</li> <li>Identify the difference of two squares</li> </ul>
<p><i>Why are we doing this now?</i> <i>How does it build on prior learning and prepare for knowledge and learning still to come?</i></p>	<p>Probability is further developed and now introduces Venn diagrams and simple tree diagrams.</p> <p>Compound measures and converting units build on year 8 measures and this will feed into bounds later in this half term.</p> <p>Indices revisits and builds on year 8 index laws and develops skills using reciprocals. This then leads into standard form.</p>	<p>Rounding is well embedded at KS3 and developed into looking at bounds.</p> <p>Algebra in year 8 and 9 allows for simultaneous equations to be developed.</p> <p>Prior learning that pupils need to remember are:</p> <ul style="list-style-type: none"> <li>How to solve linear equations</li> <li>How to round effectively</li> </ul>	<p>Pupils look at distance time/speed graphs building on compound measures from HT1. This also embeds learning on multiplicative relationships.</p> <p>Trigonometry builds on simple Trig at KS3 and extends to 3D shapes.</p> <p>Prior learning that pupils need to remember are:</p>	<p>KS3 work on circles is further developed looking at more complex compound shapes and also sectors.</p> <p>Prior learning that pupils need to remember are:</p> <ul style="list-style-type: none"> <li>Find the area and circumference of circles</li> <li>Find the area and perimeter of squares, triangles, rectangles,</li> </ul>	<p>Multiplicative relationships now is seen in direct and inverse proportion.</p> <p>Prior learning that pupils need to remember are:</p> <ul style="list-style-type: none"> <li>Calculate simple percentages</li> <li>All four operations with fractions</li> </ul>	<p>Algebra in year 8 and 9 allows for understanding of quadratics to be developed.</p> <p>Number work from KS3 is taken and extended to apply to compound situations be that interest or growth.</p> <p>Prior learning that pupils need</p>	

		<p>Prior learning that pupils need to remember are:</p> <ul style="list-style-type: none"> <li>• Probability terminology</li> <li>• Probability is out of 1</li> <li>• Understand the probability scale</li> <li>• The scale ranges from 0-1</li> <li>• Relationships between units of measure</li> </ul>	<ul style="list-style-type: none"> <li>• Be able to write powers of 10</li> <li>• How to multiply and add numbers</li> </ul>	<ul style="list-style-type: none"> <li>• Difference between a linear and quadratic graph</li> <li>• Plot coordinates in all four quadrants</li> <li>• Substitute into formulae</li> </ul>	<p>parallelograms and trapeziums</p> <ul style="list-style-type: none"> <li>• Find missing lengths in right angled triangles</li> </ul>	<ul style="list-style-type: none"> <li>• Convert between Fractions, decimals and percentages</li> </ul>	<p>to remember are:</p> <ul style="list-style-type: none"> <li>• How to solve linear equations</li> <li>• How to plot graphs</li> <li>• Factorising quadratics with/out a coefficient of <math>x^2</math></li> <li>• Percentages of amounts</li> </ul>
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