# Year 9 Autumn T1 - Topic: Factors, Powers and Roots

### Prior learning:

Multiplication of 2 and 3 values Division by powers of 10 Knowledge of prime numbers and factors

		Endpoints					
	Grade 2/Acquiring	MW	Grade 3/Working Towards	MW	Grade 7+ /extending	MW	
Main learning Steps	<ul> <li>Find the factors of a number</li> <li>Find multiples of a number</li> <li>Identify prime numbers</li> <li>Recognise special types of numbers (even, odd, squares, cubes, factors, multiples)</li> <li>Rewrite repeated multiplication using powers</li> <li>Understand the meaning of roots</li> <li>Apply the multiplication and division rule of indices to numbers</li> </ul>	28 28 29 29	<ul> <li>o Write a number as a product of prime factors</li> <li>o Find the HCF of two numbers using appropriate methods</li> <li>o Find the LCM of two (or more) numbers using appropriate methods</li> <li>o Calculate squares and square roots (with and without calc)</li> <li>o Calculate cubes and cube roots (with and without calc)</li> <li>o Evaluate calculations involving powers</li> <li>o Estimate square and cube roots</li> <li>o Know how to find roots (including using approximation)</li> </ul>	<ul> <li>78</li> <li>79</li> <li>80</li> <li>81</li> <li>81</li> <li>82</li> <li>81</li> </ul>	<ul> <li>Evaluate fractional powers</li> <li>Use index notation and index laws for fractional powers</li> <li>Manipulate the base to solve simple equations</li> <li>Understand the difference between rational and irrational numbers</li> <li>Recognise surds</li> <li>Simplify surds (e.g. V20 = 2V5)</li> <li>Multiply/divide expressions with surds and simplify</li> <li>Apply powers to expressions involving a single surd</li> <li>Expand brackets involving surds</li> <li>Simplify expressions involving the sum/difference of surds</li> <li>Rationalise fractions where the denominator is a single surd</li> </ul>	188 188 188 207a 207a 207a 207b 207b 207b 207b	<ul> <li>Know and use the language of prime numbers, factors and multiple</li> <li>Write a number as a product of its prime factors</li> <li>Find the HCF and LCM of a pair of integers by listing and using Venn diagrams</li> <li>Calculate positive integer powers and their roots.</li> <li>Estimate the square or cube root of an integer</li> <li>Apply the laws of indices to numerical expressions</li> </ul>
	Grade 4/on track	MW	Grade 5/On Track	MW	denominator is a single surd (e.g. V5)		<ul> <li>Simplify expressions involving surds (H)</li> </ul>
	<ul> <li>Apply the multiplication and division law of indices to simple numeric expressions such as 3<sup>2</sup>x 3<sup>3</sup> and 5<sup>3</sup>/5<sup>2</sup></li> </ul>	131	<ul> <li>O Evaluate negative powers</li> <li>O Use index notation and index laws for negative powers</li> </ul>	154 154	<ul> <li>O Rationalise fractions where the denominator is a binomial expression including a surd (e.g. 1 + √5)</li> </ul>	207c	<ul> <li>Rationalise denominators (H)</li> </ul>
Assessm	<ul> <li>ents</li> <li>o End of Block Test</li> <li>o In class exit tickets an</li> <li>o Mid and End of year t</li> </ul>	d Ho ests	mework		·		
Where w All of the problem Indices w	<i>vill we use these ideas again:</i> se topics will be revisited again as p solving questions such as Area and ill be revisited algebraically before	art o Volu appl	of algebra units and incorporated in me, and Pythagoras' Theorem ed to problem solving questions	ligher: Surds is incorporated into trig uch as Area and Volume, and Pythag	onome oras' Tl	etry as well as problem solving questions heorem	

# Year 9 Autumn T1 - Topic: Pythagoras' Theorem

#### **Prior learning:**

Be able to square a number with or without a calculator

To be able to square root a value with or without a calculator

To be able to perform order of operations on a calculator

To be able to perform simple rearrangement of formulae

		I	earning sequences				Endpoints
s	Grade 4/on track	MW	Grade 5/On Track	MW	Grade 7+ /extending	MW	
Main learning Step	<ul> <li>Use Pythagoras' theorem to find missing sides</li> <li>Find the distance between two points using Pythagoras</li> </ul>	150a/b 150c	<ul> <li>Prove whether a triangle is right-angled by considering the lengths of its sides</li> </ul>	150	<ul> <li>O Solve problems in 3D using Pythagoras</li> <li>O Apply Calculating with Surds and Pythagoras' Theorem</li> </ul>	217 207b	<ul> <li>Use Pythagoras' Theorem to find a missing side in a right-angled triangle.</li> </ul>
Assessme	ents o End of Block Test O In class exit tickets a O Mid and End of year	nd Homev tests	work				

Where will we use these ideas again:	
This topic will be revisited again in the Trigonometry chapter.	Higher: Pythagoras' Theorem, both 2D and 3D tend to be mixed with trigonometry for
In exams, Pythagoras' Theorem is often mixed with topics such as area to become a 5	problem solving questions.
or 6 mark problem solving exam question on both higher and foundation papers	

# Year 9 Autumn T2 - Topic: Expressions, Equations and Formulae (Linear)

#### Prior learning:

Be able to add, subtract, multiply and divide with integers Recognising factors and common factors Understand and apply powers

	Learni	ng	sequences					Endpoints
	Grade 1 -2/Acquiring	MW	Grade 3/Working Towards	MW		Grade 4/on track	MW	
	<ul> <li>Know and use correct algebraic</li> <li>conventions (e.g. 4 x x = 4x, m/2) and</li> <li>form simple algebraic expressions from a given scenario</li> </ul>	7	<ul> <li>Expand a single set of brackets such as 3(x + 2) and 4x(x-3y</li> <li>Factorise expressions such as 6a + 8 and x<sup>2</sup> - 3x</li> </ul>	93 94	0 0	Solve equations with the variable on both sides such as $3(x - 4) = 5 + x$ Apply the multiplication and division law of indices to simplify algebraic	135 135	<ul> <li>Use algebraic notation</li> <li>Substitute numbers into formulae and expressions</li> </ul>
	<ul> <li>Understand what expressions, equations, formulae and identities are</li> <li>Simplify expressions involving addition and subtraction with one variable such as a+2a+3a</li> </ul>	33	<ul> <li>Substitute positive and negative numbers into a formula such as P = 2l + 2w</li> <li>Substitute numbers into more complicated formulae such as</li> </ul>	95 95	000	expressions such as $3wx^2y^3 \times 6w^2xy$ Represent simple inequalities on a number line Solve linear inequalities Represent solutions to inequalities	138	<ul> <li>Use and understand the words expressions, equations, formulae, terms and factors</li> </ul>
steps	<ul> <li>Simplify expressions involving addition and subtraction with more than one</li> </ul>	33	C = (A+1)D/9 o Solve one step equations such as 3x	135		using set notation Grade 5/On Track	MW	<ul> <li>Collect like terms and simplify expressions</li> </ul>
arning S	variable such as 2a + 5b - a -2b o Simplify expressions by multiplying	34	= 12 or x + 5 = 9 Grade 4/on track	MW	0	Understand what an identity is by using reasoning to show two expressions are equivalent	193	<ul><li>involving sums, products,</li><li>powers and surds.</li><li>Expand single brackets</li></ul>
ain lea	expressions Simplify expressions by dividing expressions	35	<ul> <li>Apply the multiplication and division law of indices to simplify algebraic expressions such as 3wx<sup>2</sup>y<sup>3</sup></li> </ul>	131	0	Use index notation and index laws for negative powers	154	<ul> <li>Factorise into single brackets</li> </ul>
Ma	<ul> <li>Ose correct algebraic notation understanding the terms input and output</li> <li>Understand how to translate basic phrases into algebra (e.g. more than, less than, double)</li> <li>Form simple algebraic expressions from a given scenario</li> <li>Understand what a formula is</li> <li>Use a formula written in words, such as Cost = 20 x distance travelled</li> </ul>	0 0 7 0	<ul> <li>Expand and simplify expressions such as x(x<sup>2</sup> - 5) and 3(x+2) - 5(2x-1)</li> <li>Factorise expressions such as 6a + 8 and x<sup>2</sup> - 3x</li> <li>Form equations and formulae from a given scenario</li> <li>Rearrange linear formulae such as p = 3q + 5</li> <li>Solve two step equations such as 3x -1 = 9 and 3(x+4) = 15</li> </ul>	134a ) 3 94 137 p 136 x 135		Rearrange formulae that include brackets, fractions and square roots Rearrange formulae where the variable appears twice Use algebra to prove identities Use index notation and index laws for fractional powers Simplify algebraic fractions (linear factorising)	190 190 193 188 210a	<ul> <li>Application of fules of indices to algebra</li> <li>Linear inequalities</li> <li>Algebraic fractions - introduction (H)</li> </ul>
Assessm	ents o End of Block Test O In class exit tickets and Home O Mid and End of year tests	 eworl	<u> </u>				<u> </u>	

Where will we use these ideas again:	
These are fundamental algebra skills and will be implemented in problem solving	
questions, primarily in application with geometry. These skills are needed before	Higher: algebraic fractions will be revisited to incorporate quadratics
attempting harder algebra topics such as simultaneous equations, quadratics, graphs	
and sequences	

### Year 9 Autumn T2 - Topic: Perimeters & Areas of 2D shapes (excluding circles)

#### Prior learning:

Be able to find the area and perimeter of a shape by counting squares, and calculate the area of a rectangle

Be able to apply multiplication and division

Identify isosceles, equilateral, scalene and right-angled triangles

Recognise and name shapes such as square, parallelogram, rhombus, trapezium and hexagon

		Endpoints					
	Grade 1-2/Acqui	ring MW	Grade 3/Working Towards	MW	Grade 7+ /extending	MW	
Main learning Steps	<ul> <li>Understand the terms 'perpendicular lines' and lines'</li> <li>Work out the perimeter rectangle</li> <li>Work out the perimeter compound shapes</li> <li>Know and use the form area of a triangle</li> <li>Know and use the form area of a parallelogram</li> <li>Know and use the form area of a trapezium</li> </ul>	d 'parallel r of a 52 ula for the 54 ula for the 55 ula for the 56	<ul> <li>To be able to convert between metric units such as m to cm, kg to g, litres to ml</li> <li>Classify quadrilaterals by their geometric properties</li> <li>Find the area of compound shapes</li> <li>Derive and use the formula for the area of special compound shapes (kite, rhombus)</li> <li>Solve tiling problems involving area calculations</li> </ul>	112	<ul> <li>As the previous objectives but incorporating previous topics such as equations, indices, Pythagoras' Theorem and Surds</li> </ul>		<ul> <li>Calculate the areas of triangles, parallelograms, trapezia and composite shapes</li> </ul>
Assessm	o End of Blo O In class ex O Mid and I						

Where will we use these ideas again:	Higher: Areas of triangles and compound shapes will be revisited when studying					
Areas of 2D shapes will be revisited when looking at area of a circle. This will also be	trigonometry and application to problems with area and volume scale factors when					
revisited when learning about surface area and volumes of 3D shapes.	enlargement and similar shapes.					

# Year 9 Autumn T2 - Topic: Data Collection

#### Prior learning:

Identify and find equivalent fractions

		Endpoints			
	Grade 1-2/Acquiring	MW	Grade 4-5 /On Target	MW	
Main learning Steps	<ul> <li>Know the difference between sample and population</li> <li>Know and recognise primary and secondary data</li> <li>Know and recognise qualitative and quantitative data</li> <li>Know and recognise discrete and continuous data</li> </ul>	63	<ul> <li>Use probabilities given to calculate expected values (capture/recapture)</li> <li>Understand what is meant by sampling</li> <li>Discuss the reliability of different types of sample</li> <li>Identify possible sources of bias in sampling methods</li> <li>Use a variety of different sampling methods such as random and systematic</li> <li>Use results from a sample to estimate outcomes for a population</li> <li>Identify possible sources of bias in the design and use of questionnaires</li> <li>Arrangements</li> <li>Use stratified sampling methods</li> </ul>	152 152 152 152 69 176	<ul> <li>Identify when a sample may be biased</li> <li>Identify different sampling methods and how to apply them.</li> </ul>
Assessm	o End of Block Test O In class exit tickets ar O Mid and End of year t	nd Hom tests	ework		

Where will we use these ideas again:
Data collection will be revisited when looking at data handling – calculating averages
and creating graphs. The methods of sampling will later be linked to ratios and
probability.

# Year 9 Spring T1 - Topic: Fractions, Decimals and Percentages

### Prior learning:

Be able to add, subtract, multiply and divide with integers Recognising factors and common factors Understand and apply powers

	Le	Endpoints								
	Grade 2/Acquiring	MW	Grade 3/Working Towards	MW	Grade 6 /Advancing	MW				
Main learning Steps	<ul> <li>Use simple fractions to describe proportions of a whole</li> <li>Shade in a fraction of a picture</li> <li>Use shading to determine which fraction is bigger</li> <li>Convert between improper and mixed fractions</li> <li>Identify and find equivalent fractions</li> <li>Identify fractions</li> <li>Compare two fractions with the same denominator</li> <li>Understand that percentage means "out of 100"</li> <li>Add and subtract vulgar (non-mixed) fractions with the same denominator</li> <li>Grade 3/Working Towards</li> <li>Express fractions as percentages</li> <li>Compare percentage of an amount using calculator methods</li> <li>Calculate percentage of an amount using non-calculator methods</li> </ul>	24 24 25 25 26 70 40/85 71ab MW 85 85 85 86 87	<ul> <li>Compare two fractions with different denominators using common denominators</li> <li>Order a set of fractions</li> <li>Express fractions as decimals</li> <li>Express decimals as fractions in their simplest form</li> <li>Express percentages as fractions in their simplest form</li> <li>Find fraction of an amount</li> <li>Multiply vulgar (non-mixed) fractions</li> <li>Divide vulgar (non-mixed) fractions</li> <li>Perform multiplication and division calculations involving mixed numbers</li> <li>Find the reciprocal of a number</li> <li>Add and subtract vulgar (non-mixed) fractions</li> <li>Perform addition and subtraction calculations involving mixed numbers</li> <li>Convert between decimals and percentages</li> </ul>	70 70 84 84 85 72 73 74 76 71ab 85	<ul> <li>Identify recurring and terminating decimals</li> <li>Convert recurring decimals to fractions and vice versa using denominators of 9, 99, 999, etc.</li> <li>Grade 7+/Extending</li> <li>Convert recurring decimals to fractions and vice versa using algebraic methods</li> <li>Solve equations involving algebraic fractions that lead to linear equations (2x-1)/6 + (x+3)/3 = 5/2</li> <li>Fraction calculations with surds as numerators and/or denominators</li> </ul>	177 177 MW 189 210ab	<ul> <li>Find fractions and percentages of amounts</li> <li>Add, subtract, multiply and divide with fractions and mixed numbers</li> <li>Convert between fractions, decimals, and percentages</li> <li>Order fractions, decimals and percentages.</li> <li>Convert recurring fractions to decimals (H)</li> </ul>			
Assessmo	issessments       o       End of Block Test         o       In class exit tickets and Homework         o       Mid and End of year tests									
A core ni	meracy tonic that will be revisited	core numeracy tonic that will be revisited in all units								

# Year 9 Spring T2 – Accuracy and Calculation

### Prior learning:

Write down the place value of an integer digit, e.g. the 4 in 24,201

Add, subtract, multiply and divide with integers

Compare and order numbers including negatives

	Lea	Endpoints					
	Grade 1-2/Acquiring	MW	Grade 3/Working Towards	MW	Grade 4 -5/On Track	MW	
Main learning Steps	<ul> <li>Write down the place value of an integer digit, e.g. the 4 in 24,201</li> <li>Order integers up to the ten thousands place</li> <li>Recognise place value beyond 10000</li> <li>Add integers</li> <li>Add integers and decimals</li> <li>Add decimals</li> <li>Subtract integers</li> <li>Subtract involving decimals and integers</li> <li>Subtract decimals</li> <li>Multiply integers</li> <li>Divide integers</li> <li>Find the half-way value between two integers</li> <li>Write down the place value of a decimal digit, e.g. the 4 in 0.24</li> <li>Order decimals up to 3 decimal places</li> </ul>	1 2 17 17 17 17 18 18 19 20 27 1 3	<ul> <li>Multiply integers with decimals</li> <li>Divide a decimal by an integer</li> <li>Perform addition and subtraction calculations involving negatives</li> <li>Perform multiplication and division calculations involving negatives</li> <li>Perform a mixture of operations on negative numbers</li> <li>Round numbers to a given number of significant figures</li> <li>Multiply a decimal by a decimal</li> <li>Divide an integer by a decimal</li> <li>Divide a decimal by a decimal</li> <li>Use order of operations accurately</li> <li>Use a calculator to perform complex calculations</li> <li>Using place value knowledge to manipulate a given calculation</li> <li>Estimate answers to calculations</li> <li>State whether an estimation is an over- or underestimate</li> </ul>	66 67 68a 68b 90 66 67 67 75 77 91 91	<ul> <li>Find and use the upper and lower bounds of rounded numbers</li> <li>Find the error interval of a rounded number</li> <li>Find the error interval of truncated numbers</li> <li>Understand the difference between the bounds of discrete and continuous quantities</li> <li>Understand the difference between the bounds of discrete and continuous quantities</li> </ul>	132 155 MW	<ul> <li>Use place value when calculating with decimals</li> <li>Order positive and negative integers using the symbols =, ≠,&lt;, &gt;,≤,≥.</li> <li>Round to a number of decimal places or significant figures</li> <li>Add and subtract positive and negative integers and decimals</li> <li>Multiply and divide positive and negative integers and decimals</li> <li>Use order of operations in multistage calculations.</li> <li>Round numbers and measures to an appropriate degree of accuracy.</li> <li>Use approximate values obtained by rounding to optimate</li> </ul>
	<ul> <li>Find the half-way value between two numbers (including decimals)</li> </ul>	27			Grade 7+/Extending	MW	calculations
	<ul> <li>Round an integer to the nearest power of 10</li> </ul>	31			• Find the upper and lower bounds of calculations and	206	<ul> <li>Use inequality notation to state error intervals and interpret limits</li> </ul>
	<ul> <li>Round decimals to the nearest decimal place</li> </ul>	32			round to an appropriate degree of accuracy		<ul><li>of accuracy.</li><li>Find the upper and lower bounds</li></ul>
	<ul> <li>Solve questions involving negative numbers in real life (e.g. temperature, golf scores, sea level)</li> </ul>	23					on the value of a quantity that has been rounded.

						• Find the upper and lower bounds of calculations and represent this to an appropriate degree of accuracy.
Assessme	ents	<ul> <li>o End of Block Test</li> <li>O In class exit tickets an</li> <li>O Mid and End of year t</li> </ul>	d Hom ests	ework		

Where will we use these ideas again:	Higher:
Rounding will appear throughout topics on the calculator paper such as areas of circles	Calculations with decimals lends itself to use of multipliers in percentages, leading to
and trigonometry	compound interest/depreciation.
	Complex calculations using a calculator will be needed for topics such a solving
	quadratics and iteration

# Year 9 Spring T2 – Topic: Compound Measures

### Prior learning:

Add, subtract, multiply and divide with integers Area of 2D shapes

	Le	arni	ng sequences				Endpoints
	Grade 1-2/Acquiring	MW	Grade 3/Working Towards	MW	Grade 4-5/On Track	MW	
Main learning Steps	<ul> <li>Convert between hours, minutes and seconds</li> <li>Convert between the 12 and 24 hour clock</li> <li>Calculate the difference between two times using the number line method</li> <li>Calculate the difference between two times using the arithmetic method</li> <li>Interpret a distance table</li> <li>Interpret timetables</li> </ul>	6a 6a 6a 6b 6b	• To be able to convert between metric units such as m to cm, kg to g, litres to ml		<ul> <li>Understand and use compound measures (SDT, DMV, FPA etc) in simple questions</li> <li>Understand and use compound measures (SDT, DMV, FPA) in more complex questions involving more than one part</li> <li>Rates of pay</li> <li>Rates of flow</li> </ul>	142	<ul> <li>Use and convert between standard units of length, mass, volume, capacity, time and area.</li> <li>Solve problems involving compound measures such as speed and density</li> <li>Convert between units of compound measures (H)</li> </ul>
Assessme	issessments       o       End of Block Test         O       In class exit tickets and Homework         O       Mid and End of year tests						

Where will we use these ideas again:	Higher:
DMV will be combined with volume questions	Conversion of measures will link to volumes of 3D shapes and flow rates.
FPA will be combined with area questions	SDT will lead to graphical interpretations and kinematics

### Year 9 Summer T1 – Topic: Quadratics

#### **Prior learning:**

- Perform addition and subtraction calculations involving negatives
- Perform multiplication and division calculations involving negatives
- Solve one step equations such as 3x = 12 or x + 5 = 9
- Solve two step equations such as 3x 1 = 9 and 3(x+4) = 15
- Rearrange linear formulae such as p = 3q + 5
- Substitute positive and negative numbers into a formula such as P = 2I + 2wFind the HCF of two numbers using appropriate methods
- Apply the multiplication and division law of indices to simplify algebraic expressions such as  $3wx^2y^3 x 6w3x4y2$
- Expand a single set of brackets such as 3(x + 2) and 4x(x-3y)
- Expand and simplify expressions such as  $x(x^2 5)$  and 3(x+2) 5(2x-1)
- Factorise expressions such as 6a + 8 and x<sup>2</sup> 3x
- Use a calculator to perform complex calculations

Learning sequences						Endpoints	
	Grade 4/ On track	MW	Grade 7/ Extending	MW	Grade 8 & 9/ Extending	MW	
Main learning Steps	<ul> <li>Expand and simplify a double set of brackets to form a quadratic</li> <li>Grade 5/ On track</li> <li>Find and simplify the product of three binomials</li> <li>Factorise basic quadratic expressions (a = 1)</li> <li>Factorise quadratics that are the difference of two squares</li> <li>Solve basic quadratic equations by factorising (a = 1)</li> </ul>	134b 178 157 158 158	<ul> <li>Factorise harder quadratics where a ≠ 1 or (x+y)2 - 4(x+y)</li> <li>Solve equations involving harder quadratics (a ≠ 1)</li> <li>Solve quadratic equations by using the quadratic formula</li> </ul>	192 192 191	<ul> <li>Complete the square by rewriting quadratics</li> <li>Use completing the square to solve equations</li> <li>Solve equations involving algebraic fractions that lead to quadratic equations</li> <li>Simplify algebraic fractions</li> <li>4 operations with algebraic fractions</li> <li>Rationalise fractions where the denominator is a binomial expression including a surd (e.g. 1 + V5)</li> <li>Application of quadratics to problem solving questions e.g. proving the area of a shape.</li> </ul>	209a 209b 210b 210a 210a 210a 207c	<ul> <li>Expand binomial expressions</li> <li>Factorise and Solve Quadratic Equations</li> <li>Using the quadratic formula (H)</li> </ul>
Assessme	issessments       o       End of Block Test         o       In class exit tickets and Homework         o       Nid and End of year tests						
	O Mid and End of year tests						

Where will we use these ideas again:	Higher:
Quadratics can be combined with topics such as Pythagoras and calculating areas to	Quadratics will be revisited in more complex graphs, functions and will be combined
form problem solving questions.	with other topics as part of problem solving such as probability, volumes simultaneous
	equations

### Year 9 Summer T2– Topic: Angles and Polygons

#### **Prior learning:**

Understand the terms 'perpendicular lines' and 'parallel lines' Know the definition of angle

Know and use the correct notation for an angle

Recognise and name the different types of angles

Name different types of polygons using the number of sides

Recognise and use the fact that a shape is regular

	Le	Endpoints					
	Grade 2/Acquiring <ul> <li>Estimate angles and measure</li> </ul>	MW 46a	<ul><li>Grade 3/Working Towards</li><li>Recognise corresponding, alternate</li></ul>	MW 120	<ul><li>Grade 4/On Track</li><li>Prove that the angles of a</li></ul>	MW 121	<ul> <li>Describe and apply the properties</li> </ul>
Main learning Steps	<ul> <li>them accurately</li> <li>Draw angles accurately</li> <li>Use properties of angles at a point and angles on a straight line</li> </ul>	46b 45	<ul> <li>and co-interior angles</li> <li>Recognise vertically opposite angles and know that they are equal</li> <li>Understand why some shapes tessellate and others do not</li> <li>Use the fact that the angles of a triangle add up to 180° to find angles</li> <li>Use angle properties of isosceles, equilateral and right-angled triangles</li> <li>Calculate interior and exterior angles of a quadrilateral</li> <li>Calculate the sum of angles in any polygon</li> <li>Calculate exterior and interior angles of a regular polygon</li> </ul>	12a 122 122 123 123	<ul> <li>triangle add up to 180° and use this to find angles</li> <li>Prove the exterior angle of a triangle is equal to the sum of the two interior angle</li> <li>Prove that the angles in a quadrilateral add up to 360</li> </ul>	123	<ul> <li>of angles at a point, on a line and at intersecting and parallel lines.</li> <li>Derive and use the sum of angles in a triangle</li> <li>Derive and apply the properties and definitions of special types of triangles and quadrilaterals</li> <li>Solve geometrical problems on coordinate axes</li> <li>Identify and use congruence and similarity</li> <li>Deduce and use the angle sum in any polygon</li> <li>Calculate interior and exterior angles for regular polygons</li> </ul>
Assessm	ssessments       o       End of Block Test         O       In class exit tickets and Homework         O       Mid and End of year tests						

Where will we use these ideas again:	Higher:
Constructions and Loci	These will be integrated with circle theorems and vectors
Forming and solving equations with angles	

# Year 9 Summer T2 – Topic: Standard Form

### Prior learning:

Be able to use place value to multiply and divide numbers by powers of 10 Understand the effect of place value when multiplying and dividing

	Learning sequences	Endpoints	
20	Grade 3/Working Towards	MW	
Main learnin <sub>§</sub> Steps	<ul> <li>Understand the rules of standard form</li> <li>Convert between numbers in ordinary and standard form</li> <li>Calculate in standard form with and without a calc</li> </ul>	83 83 83	<ul> <li>Calculate and interpret numbers written in standard form.</li> </ul>
Assessments	<ul> <li>End of Block Test</li> <li>In class exit tickets and Homework</li> <li>Mid and End of year tests</li> </ul>	·	
Where will we	e use these ideas again:		

where will we use these laeus again.	
This topic will be implemented within geometry and data handling topics.	Higher: Standard form often gets included in Bounds and Limits calculations as well as
	applying to geometry questions. Converting between metric units and can be needed
	when looking at frequency densities in histograms
	·