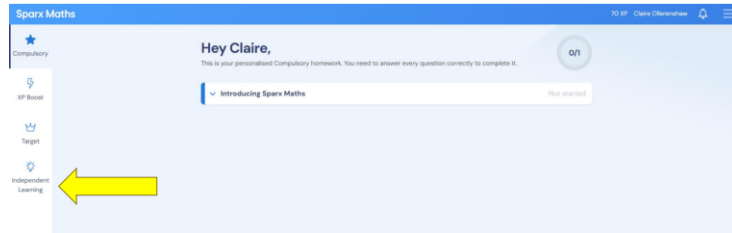


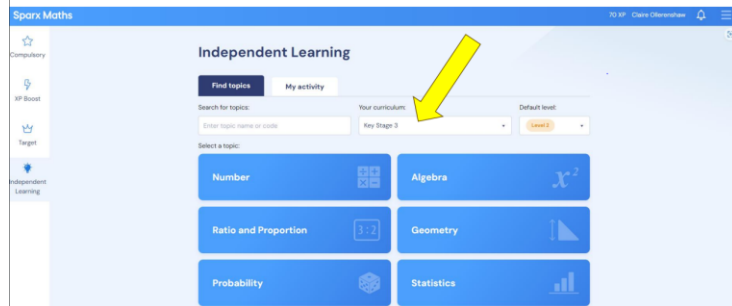
Y9 Knowledge Organisers

SPARX Independent Learning Instructions

1. Click on the Independent learning icon on the left-hand side of your screen.



2. Make sure 'Key Stage 3' is selected under 'Your curriculum'



3. Use your Knowledge Organiser to choose the topic that you want to revise:

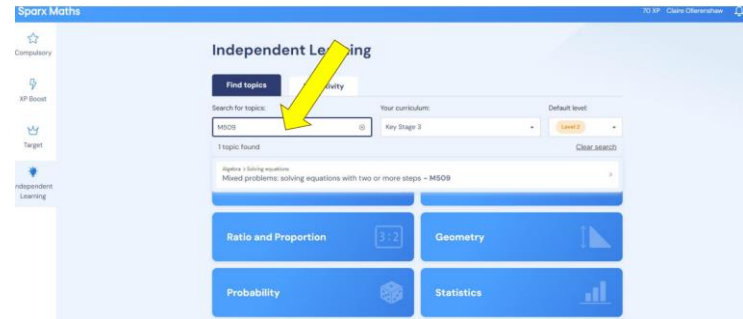
Liskeard School & Community College Year 9 Maths – Autumn Term Knowledge Organiser

Enter these SPARX codes into the Independent Learning area on SPARX to generate questions to help you revise and consolidate your learning.

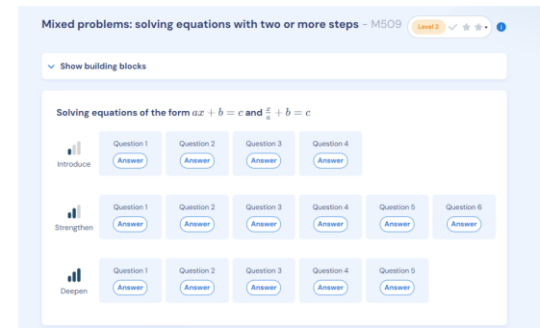
Autumn 1	SPARX CODE	Autumn 2	SPARX CODE
Number (4)		Graphs 2 (Straight Line Graphs)	M797
Types of number (rational, irrational, real)		Plotting and reading lines parallel to the axes	M4932
Directed numbers (recap of prior learning)	M288, M106, M527	Plotting straight line graphs using a table of values	M4932
Problems involving integers and decimals		Identifying the gradient & intercept from equation	M888
Product of primes	M122, M108	Find the gradient & intercept from a graph	M843
PE7 & LCM (using Venn diagrams)	M698, M227, M365	Real life graphs	
Calculations with fractions (recap of prior learning)	M340, M931, M157, M118, M265		
PII Surds	M120, U138	PII Equation of a line given two points	M544, M957
Algebra 3 (Forming & Solving Equations & Inequalities)		PII Equations of perpendicular lines	U858
Solving two step equations & inequalities	M509		
Solving equations with brackets	M554		
Solving equations & inequalities with unknowns on both sides	M518, M732		
Forming & solving equations and inequalities			
Formulae, equation, expression, identity?	M184		
Rearranging formulae (1 step)			
PII Rearranging more complex formulae			
Expanding binomials	M960		



4. Type the corresponding SPARX code into the 'search for topics' box



5. This will give you a set of questions to revise your chosen area of maths. The levels are of increasing difficulty.



When will you sit a test?

w/c 13th Nov	Forming and Solving Equations Topic Test (30 mins)
w/c 11th Dec	Straight Line Graphs Topic Test (30 mins)
w/c 8th Jan	Year 9 End of Term Test (60mins)
w/c 19th Feb	Using Percentages Topic Test (30 mins)
w/c 18th Mar	Maths & Money Topic Test (30 mins)
w/c 15th April	Rotation & Translation Topic Test (30 mins)
w/c 6th May	Year 9 End of Term Test (60mins)
w/c 10th June	Enlargement & Similarity Topic Test (30 mins)

Autumn Term

Enter these SPARX codes into the Independent Learning area on SPARX to generate questions to help you revise and consolidate your learning.

Autumn 1	SPARX CODE	Autumn 2	SPARX CODE
Number (4)		Graphs 2 (Straight Line Graphs)	
Types of number (rational, irrational, real)		Plotting and reading lines parallel to the axis	M797
Directed numbers (recap of prior learning)	M288, M106, M527	Plotting straight line graphs using a table of values	M932
Problems involving integers and decimals		Identifying the gradient & intercept from equation	M888
Product of Primes	M322, M108	Find the gradient & intercept from a graph	
HCF & LCM (using Venn diagrams)	M698, M227, M365	Real life graphs	M843
Calculations with fractions (recap of prior learning)	M385, M931, M157, M110, M265		
(H) Surds	M135, U338	(H) Equation of a line given two points	M544, M957
Standard Form	M719, M678	(H) Equations of perpendicular lines	U898
Algebra 3 (Forming & Solving Equations & inequalities)			
Solving two step equations & inequalities	M509		
Solving equations with brackets			
Solving equations & inequalities with unknowns on both sides	M554		
Forming & solving equations and inequalities	M118, M732		
Formulae, equation, expression, identity?			
Rearranging formulae (1 step)	M184		
(H) Rearranging more complex formulae			
Expanding binomials	M960		

Spring Term

Enter these SPARX codes into the Independent Learning area on SPARX to generate questions to help you revise and consolidate your learning.

	SPARX CODE		SPARX CODE
Shape 2 (3D Shapes)		Calculating 3 (Maths and Money)	
Names of 2D and 3D shapes		Bills and bank statements	M901
Recognise prisms	M276	Simple interest	
Nets of cubes, cuboids and other 3D shapes	M518	Compound interest	U332
Plans and elevations	M228	VAT	
Area of a circle	M231	Wages and tax calculations	
Circumference of a circle	M169	Exchange rates	U610
Volume of cube and cuboids	M765	Unit pricing problems	M681
Volume of 3D shapes including prisms and cylinders	M697 M722		
Surface area of cubes and cuboids	M884		
Surface area of 3D shapes including triangular prisms	M534 M661	Geometry 5 (Rotations & Translations)	
Surface area of cylinder	M936	Rotational symmetry	M523
(Higher) Volume of cones, pyramids and spheres	U426	Rotate a shape about a point on a shape	M910
FDP 6 (Using Percentages)		Rotate a shape about a point not on a shape	
FDP equivalence	M958 M264	Translations	M139
Percentage of an amount	M437 M905	(Higher) Series of transformations	M881
Percentage increase and decrease (non-calculator)	M476	Describing transformations	M881
Percentage increase and decrease using multipliers	M533		
Express change as a percentage	M235		
Reverse percentage change	M528		
Solve percentage problems (non-calculator)			
Solve percentage problems (calculator)			
(Higher) Repeated percentage change	U332		

Summer Term

Enter these SPARX codes into the Independent Learning area on SPARX to generate questions to help you revise and consolidate your learning.

	SPARX CODE		SPARX CODE
Shape 3 (Pythagoras' Theorem)		Geometry 6 (Enlargement & Similarity) continued	
Squares and square roots	M135	(H) Negative scale factors	U134
Determine if a triangle is a right-angled triangle	M677	Finding missing side and angles in similar shapes	U518
Calculate the length of the hypotenuse		(H) Solving problems with similar triangles	
Calculate the missing side lengths		(H) Explore ratio in right angle triangles (trigonometry)	U283 U545
Using Pythagoras' theorem on coordinate axes		Probability 3 (Probability)	
(H) Use Pythagoras' theorem in 3D shapes	M147	Single event probability	
Geometry 6 (Enlargement & Similarity)		Relative frequency	M332
Draw and measure different types of angles (recap)	M331 M780	Expected outcomes	M206
Construct and interpret scale drawings	M112	Independent events	M299
Congruent shapes	M124	(H) Tree diagrams	
Recognise enlargement & similarity	M377 M324	(H) Tree diagrams without replacement	M572
Enlarging shapes by a positive integer scale factor	M178	Use diagrams to work out probabilities	
Enlarging shapes by a positive integer scale factor from a point		Ratio 3 (Rates)	
		Speed, distance, time	M247 M221
Enlarging shapes by a fractional scale factor	U519	Density, mass & volume	U910