





Y7 Knowledge Organisers

Where every lesson counts.

SPARX Independent Learning Instructions

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

Sparx N	faths	70 XP	Claire Olierenshaw	Φ	≡
t Compulsory	Hey Claire, This is your personalised Computery homework. Was need to assume every question connectly to complete it.				
S Roost	✓ Introducing Sparx Mathe Not store				
Target					
independent Learning	—				

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

Sparx Ma	ha	70 XP Claire Olerenshow	\$ ≡
Compulsory	Independent Le Jing		0
XP Boost	Find topics view Beach for topics Your curriculum Default level		
Target	Instal (1997) (1		
independent Learning	Agens - Liketing the representation and Knowle Budgettrucking (into expressions with multiple operations – M327 3		
	Ratio and Proportion 3:2 Geometry		
	Probability Statistics		

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:

Autumn 1	SPARX CODE	Autumn 2	SPARK CODE
Sequences 1	and the second second	Number 1 (Place Value)	
Sequences with patterns	M241	Read & write integers up to 1 billion	M704
Linear & non-linear sequences	M6418	Position numbers on a number line	M763
Missing terms in a sequence	N8866 N991	Round to powers of 10 & compare integers	M111, M431
Algebra 1 (Algebraic Notatio	a)	Understand place value for decimals	M522
diagrams and Letters with Single Function Machines	N428	Compare and order any number up to 1 billion	
Find the input when given the output	M\$75	Round to 1 sig Fg	M994, M131
Use letters to generalise numbers	ME13, ME30	Median & range	M934, N328
Single function machines with algebra		(Higher) Standard Form	M719, M678
Find functions from expressions		FDP 1 (Fractions, decimals & percentage eq	purvalence)
 To substitute into an expression		Convert between fractions & decimals (5ths & %)	
2-step function machines with algebraic expressions.	M327	Convert between fractions & decimals (1/8 & 1/1000)	MISE
Find the operation that forms an expression		Carvert fluently betaven FDP	1. 1.1.1.1.1.1.1
More complex substitution	M206, M979	To understand percentages	M437
(Higher) Generate a sequence from a rule	M366 M991	Equivalent Fractions	M430
(Haher) Recognise linear & non-linear graphs		Use & interpret a pie chart	M165
Algebra 1 (Equality & Equivaler	nori	(Higher) Explore fractions >1	M605
Understand equality & equivalence	1		
Fact Families			
	a second s		

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

Introduce	Question 1	Question 2	Question 3	Question 4		
Strengthen	Question 1	Question 2	Question 3	Question 4	Question 5	
II	Question 1	Question 2	Question 3	Question 4		

SPARX codes beginning with an M = Key Stage 3 content and U = GCSE content. You will need to ensure that you choose the correct curriculum from the drop-down menu in 'independent Learning' on SPARK.

Autumn Term

Autumn 1	SPARX CODE	Autumn 2	SPARX CODE	
Number 1 (Place Value)		Calculating 1 (Problem Solving with Multiplication & Division)		
Read & write integers up to 1 billion	M704	4 Properties of multiplication & division		
Position numbers on a number line	M763	Factors & Multiples	M698 M227	
Round to powers of 10 & compare integers	M111, M431	Multiplying by powers of 10	M113	
Understand place value for decimals	M522	Converting metric units	M772, M761	
Compare and order any number up to 1 billion		(Higher) Multiplying by 0.1 & 0.01		
Round to 1 sig fig	M994, M131	Formal Methods of multiplying integers	M187	
Median & range	M934, N328	Formal methods of multiplying decimals	M803	
(Higher) Standard Form	M719, M678	Formal methods for dividing integers	M354	
Calculating 1 (Problem Solving with Addition & Subtraction)	SPARX CODE	Formal methods for dividing decimals	M262	
Financial Maths problems	M901	Order of operations (BIDMAS)	M521	
Tables & Timetables	M963 M747	Calculating the mean	M940	
Bar charts and line graphs	M738 M460 M140	Sequences 1		
Frequency Trees		Sequences with patterns	M241	
		Linear & non-linear sequences	M418 M866	
		Missing terms in a sequence	M991	
		Algebra 1 (Equality & Equivalence)		
		Understand equality & equivalence		
		Fact Families		
		One step equations (+ & -)	N4707 N4500	
		One step equations (x & ÷)		
		Like and unlike terms		
		Collecting like terms	M795, M531, M949	

Autumn Term

Autumn 1	SPARX CODE	Autumn 2	SPARX CODE		
Sequences 1		Number 1 (Place Value)			
Sequences with patterns	M241	Read & write integers up to 1 billion	M704		
Linear & non-linear sequences	M418 M866	Position numbers on a number line	M763		
Missing terms in a sequence	M991	Round to powers of 10 & compare integers	M111, M431		
Algebra 1 (Algebraic Notation		Understand place value for decimals	M522		
diagrams and Letters with Single Function Machines	M428	Compare and order any number up to 1 billion			
Find the input when given the output	M175	Round to 1 sig fig	M994, M131		
Use letters to generalise numbers	M813, M830	Median & range	M934, N328		
Single function machines with algebra		(Higher) Standard Form	M719, M678		
Find functions from expressions		FDP 1 (Fractions, decimals & percentage equivalence)			
To substitute into an expression	M417	Convert between fractions & decimals (5ths & ¼)			
2-step function machines with algebraic expressions	M327	Convert between fractions & decimals (1/8 & 1/1000)	M958		
Find the operation that forms an expression		Convert fluently between FDP			
More complex substitution	M208, M979	To understand percentages	M437		
(Higher) Generate a sequence from a rule	M116 M991	Equivalent Fractions	M410		
(Higher) Recognise linear & non-linear graphs		Use & interpret a pie chart	M165		
Algebra 1 (Equality & Equivalence	ce)	(Higher) Explore fractions >1	M601		
Understand equality & equivalence					
Fact Families					
One step equations (+ & -)					
One step equations (x & ÷)	1 IVI / U / , IVI 509				
Like and unlike terms					
Collecting like terms	M795, M531, M949				

Spring Term

Calculating 1 (Problem Solving with Addition & Subtraction)	SPARX CODE	Calculating 1 (Problem Solving with Multiplication & Division) continued	SPARX CODE		
Financial Maths problems	M901	Area of shapes	M610, M291		
Tables & Timetables M963 M747		(Higher) Area of a trapezium	M705		
Bar charts and line graphs	M738 M460 M140	Multiplying and dividing algebraic expressions.			
Frequency Trees		FDP2 (Fractions & Percentages of an amount)			
Calculating 1 (Problem Solving with Multiplic	ation & Division)	Find a fraction of an amount	M695		
Properties of multiplication & division		Find a percentage of an amount - mental methods	M437		
Factors & Multiples	M698 M227	Percentage of an amount - calculator methods	M905		
Multiplying by powers of 10	M113	(Higher) To solve problems with fractions greater than 1 and percentages greater than 100%.			
Converting metric units M772, M761		Number 2 (Negative Numbers	5)		
(Higher) Multiplying by 0.1 & 0.01		Understand and use representations of negative numbers.			
Formal Methods of multiplying integers	M187	Ordering negative numbers	M527		
Formal methods of multiplying decimals	M803	Adding directed numbers	M106		
Formal methods for dividing integers	M354	Subtracting negative numbers	M106		
Formal methods for dividing decimals	M262				
Order of operations (BIDMAS)	M521				
Calculating the mean	M940				

Summer Term

Number 2 (Negative Numbers) continued from Spring Term	SPARX CODE	Geometry 1 (Constructing, measuring & using geometric notation) continued	SPARX CODE	
Adding & subtracting negative numbers	M106	Construct triangles using SSS, SAS and ASA	M565	
Multiplying negative numbers	M288	Interpret pie charts	M165	
Dividing negative umbers	M288	Geometry 2 (Geometric Reasoning)		
Using a calculator for directed number calculations.		Angles around a point and on a straight line	M818	
FDP 3 (Adding & Subtracting Fractions)		Vertically opposite angles	M163	
Equivalent fractions	M410	Angles in quadrilaterals	M393	
Add fractions with different denominators	M835	Complex angles and angles in polygons	M319	
Subtract fractions with different denominators	M835	Angles in parallel lines	M606	
Fractions in algebraic contexts M336		Probability 1 (Sets & Probability)		
Compare fractions	M335	Identify & represent sets	M834	
Geometry 1 (Constructing, measuring & using geometric notation)		Interpret and create Venn diagrams M82		
Conventional notation		Venns – intersections, unions & compliments		
Measure & draw angles	M780 M331	Single events	M941, M938	
Perpendicular & parallel lines & types of quadrilateral	M814	The probability scale		
Construct triangles using SSS	M565	Sum of probabilities of all possible outcomes		