



BBG SENTINELS

Paper 1	Sparx Code
Rounding integers	U480
Converting between fractions, decimals and percentages	U888
Understanding, measuring and drawing angles	U447
Understanding and ordering decimals	U435
Calculating with roots and powers	U851
Drawing bar charts	U363
Angles on a line and about a point	U390
Function machines with letters, Constructing and solving equations	M428,U599
Writing and simplifying ratios	U687
Multiplying and dividing with negative numbers	U548
Calculating with roots and powers	U851
Using the correct order of operations	U976
Finding the area and perimeter of simple shapes	U993
Writing probabilities as fractions	U408
Using a written method to multiply integers	U127
Interpreting stem-and-leaf diagrams	U909
Solving direct proportion word problems	U721
Solving equations with two or more steps	U325
Calculating with roots and powers	U851
Translation	U196
Position-to-term rules for arithmetic sequences	U498
Adding and subtracting mixed numbers	U793
Multiply with mixed numbers, Convert mixed numbers & improper fractions	U224,U692
Finding the area of compound shapes, Solving direct proportion word problems	U970,U721
Venn diagrams with set notation	U748
Estimating calculations	U225
Finding equations of straight line graphs	U315
Equations of parallel lines	U377
Fractions of amounts, Combining ratios, Convert between fractions & percentages	U881,U921,U888
Finding original values in percentage calculations	U286
Solving inequalities with the unknown on both sides	U738

Paper 2	Sparx Code
Converting between fractions, decimals and percentages	U888
Converting units of length, mass and capacity	U388
Understanding and ordering integers	U600
Ordering fractions	U746
Drawing and interpreting scale diagrams	U257
Interpreting bar charts	U557
Adding and subtracting integers	U417
Using algebraic notation	U613
Solving direct proportion word problems	U721
Rotation	U696
Reflection	U799
Plotting straight line graphs	U741
Angles in triangles, Writing and simplifying ratios	U628,U687
Factorising into one bracket	U365
Finding the highest common factor	U529
Using standard form with positive indices	U330
Using standard form with negative indices	U534
Adding and subtracting numbers in standard form	U290
Calculating with rates	U256
Identifying parts of circles	U767
Reading, converting and calculating with time	U902
Finding prime numbers	U236
Interpreting frequency tables and two-way tables	U981
Drawing pie charts	U508
Finding percentages of amounts with a calculator	U349
Simplifying expressions using index laws	U662
Plans and elevations	U743
Growth and decay	U988
Calculating with density	U910
Tree diagrams for independent events	U558
Finding the volume of cylinders, Calculating with rates	U915,U256
Substituting into algebraic formulae	U585
Changing the subject of formulae with two or more steps	U181

Paper 3	Sparx Code
Ordering negative numbers	U947
Converting units of length, mass and capacity	U388
Converting between fractions, decimals and percentages	U888
Finding the lowest common multiple (LCM)	U751
Using algebraic notation	U613
Solving direct proportion word problems	U721
Sample space diagrams	U104
Drawing and interpreting pictograms	U506
Using a ruler	M985
Understanding, measuring and drawing angles	U447
Line and shape properties	U121
Reading and plotting coordinates	U789
Calculating midpoints	U933
Writing probabilities as fractions	U408
Finding fractions of amounts with a calculator	U916
Using algebraic notation	U613
Substituting into algebraic formulae	U585
Calculating with speed	U151
Simple interest calculations	U533
Using and interpreting linear real-life graphs	U638
Use and interpret linear real-life graphs, Convert units of length, mass & capacity	U388
Constructing loci	U820
Finding percentages of amounts with a calculator	U349
Using a calculator	U926
Rounding decimals using significant figures	U965
Using Pythagoras' theorem in 2D, Rounding decimals using significant figures	U385
Prime factor decomposition	U739
Finding the HCF and LCM using prime factor decomposition	U250
Substituting into real-life formulae	U144
Probabilities as fractions, decimals and percentages, Share amounts in a ratio	U510,U577
Plotting graphs of quadratic functions	U989
Solving quadratic equations graphically	U601
Fractions of amounts, Percentages of amounts, Writing and simplifying ratios	U916,U349,U687
Line & shape properties, Angles on parallel lines, Construct and solve equations	U121,U826,U599
Finding unknown sides in similar shapes	U578
Finding averages from grouped data	U877

BBG – Maths
Foundation
Littlemore,
Norrington,
Cattley,
Hammond



BBG SENTINELS

Paper 1	Sparx Code
Position-to-term rules for arithmetic sequences	U498
Adding and subtracting mixed numbers	U793
Multiply with mixed numbers, Convert mixed numbers & improper fractions	U224,U692
Finding the area of compound shapes, Solving direct proportion word problems	U970
Solving direct proportion word problems	U721
Venn diagrams with set notation	U748
Estimating calculations	U225
Finding equations of <u>straight line</u> graphs	U315
Equations of parallel lines	U377
Fractions of amounts, <u>Combine</u> ratios, Convert between fractions & percentages	U881,U921,U888
Calculating the mean	U291
Finding the percentage an amount has been changed by	U278
Solving simultaneous equations using elimination	U760
Combining transformations	U766
Interpreting graphs of quadratic functions	U667
Graphs of cubic functions	U980
Graphs of reciprocal functions	U593
Drawing histograms with unequal class widths	U814
Interpreting histograms	U983
Expanding triple brackets	U606
Finding the arc length of sectors, Finding the area of sectors	U221,U373
Tree diagrams for dependent events, Multiplying algebraic fractions	U729,U457
Rationalising denominators containing a single term	U707
Adding and subtracting surds	U872
Converting recurring decimals to fractions	U689
Finding unknown sides in similar shapes, Writing and simplifying ratios	U578,U687
Index rules with positive indices, Indices of the form a/b	U235,U772
Surface area and volume of cuboids, Simultaneous equations involving quadratics	U929,U786,U547
Graphs of trigonometric functions, Using the exact values of trigonometric ratios	U450,U627
Equations of circles & tangents, Find the equation of a straight line from 2 points	U567,U848

Paper 2	Sparx Code
Finding the highest common factor	U529
Using standard form with positive indices	U330
Using standard form with negative indices	U534
Adding and subtracting numbers in standard form	U290
Plans and elevations	U743
Plans and elevations	U743
Growth and decay	U988
Calculating with density	U910
Enlargement by a positive or negative scale factor	U134
Tree diagrams for independent events	U558
Finding the volume of cylinders, Calculating with rates	U915,U256
Multiplying column vectors by a scalar, Understanding column vectors	U564,U632
Finding the volume of cubes and cuboids, Finding the volume of pyramids	U786,U484
Calculating with ratios and algebra	U676
Drawing box plots	U879
Comparing populations using box plots and cumulative frequency graphs	U507
Using the product rule for counting	U369
Compound interest calculations	U332
Simplifying algebraic fractions by cancelling common factors	U103
Factorising quadratic expressions of the form ax^2+bx+c	U858
Dividing algebraic fractions	U824
Substituting into functions	U637
Substituting into composite functions	U895
Finding inverse functions	U996
Substituting into iterative formulae	U434
The area rule, The sine rule	U592,U952
Finding bounds for calculations, Standard form with a calculator	U587,U161
Term-to-term rules, Constructing and solving equations	U213, U599
Geometric sequences, <u>Factorise</u> to solve quadratics of the form $ax^2+bx+c=0$	U958, U960
Circumference of circles, Using the exact values of trigonometric ratios (Higher)	U604,U319

Paper 3	Sparx Code
Using Pythagoras' theorem in 2D, <u>Rounding</u> decimals using significant figures	U385,U965
Prime factor decomposition	U739
Finding the HCF and LCM using prime factor decomposition	U250
Substituting into real-life formulae	U144
Probabilities as fractions, decimals and percentages, Share amounts in a ratio	U510,U577
Plotting graphs of quadratic functions	U989
Solving quadratic equations graphically	U601
Fractions of amounts, Percentages of amounts, Writing and simplifying ratios	U916,U349,U687
Line & shape properties, Angles on parallel lines, Construct and solve equations	U121,U826,U599
Drawing and interpreting scale diagrams, Finding the areas of triangles	U257,U945
Finding error intervals	U657
Understanding <u>sin, cos</u> and tan, Constructing and solving equations	U605,U599
Drawing cumulative frequency graphs	U182
Interpreting cumulative frequency graphs	U642
Constructing inverse proportion equations	U138
Graphs of linear inequalities	U747
Acceleration from velocity-time graphs, Estimate gradients of non-linear graphs	U562,U800
Distance from velocity-time graphs, Estimate areas under non-linear graphs	U611,U882
Rationalising denominators containing two terms	U281
Solving quadratic inequalities	U133
Finding the surface area and volume of similar shapes, Combining ratios	U110,U921
Tree diagrams for dependent events	U729
Solving geometric problems using vectors	U781
Identifying parallel vectors	U660
Finding the turning point of a quadratic graph by completing the square	U769
Transforming graphs	U455
Proving the circle theorems	U807

BBG – Maths
Higher
Gale, Brazier,
Jarvis, McAulay