



**MVC
Mathematics
Department**

This document outlines the main activities you will complete this year. Use this as a guide to prepare for lessons or check your understanding.

B scheme

Name:

Maths teacher(s):

I will:

- work to the best of my ability, showing all my workings
- complete my homework to a good standard by the deadline set
- show tenacity when solving problems
- always have the correct equipment for all lessons

Signed:

.....

The MVC Mathematics Department will:

- help you develop fluency in mathematical concepts
- help you develop your mathematical communication and reasoning
- help you develop problem solving skills
- set appropriate homework
- regularly assess your progress
- give you regular feedback and let you know what else you need to do to maintain or increase your progress

Signed:

MVC Maths Department



Online tasks are usually set on www.hegartymaths.com

To access this site you need to enter your name, date of birth and then set your own password. If you have forgotten your password please contact your maths teacher via email.

Every lesson you will need to bring this equipment:

- exercise book
- learning log
- scientific calculator
- black pen × 2
- pencil × 2
- ruler
- eraser
- pencil sharpener
- highlighter
- glue stick

When advised, you will also need to bring:

- protractor
- pair of compasses
- colouring pencils

Optionally:

- colouring pencils

	HW	Objectives Autumn	Hegarty Tasks
BNum1	—	Order any decimals and put them on a number line	46
		Do calculations in the right order, and use brackets (BIDMAS)	120
		Order negative numbers and put them on a number line	37
		Add and subtract negative numbers	39, 40
		Explain and work out the Lowest Common Multiple (LCM) and Highest Common Factor (HCF) of a pair of numbers	31
		Recognise prime numbers up to 100	34
		Recognise numbers that have particular properties, such as square numbers, triangular numbers, cube numbers, multiples of 3 etc, factors of 20 etc	28
		order, ascending, descending, order of operations, operation, add, plus, sum, subtract, take away (NOT minus!), multiply, times, of, divide, share, brackets, BIDMAS, calculate, evaluate, expression, negative, positive, lowest common multiple, LCM, highest common factor, HCF, prime, cube, square, triangular number, factor, multiple, product of prime factors, LCM, HCF	
BAlg1	—	Explain the meaning of term, expression, algebraic	154
		Write an expression that uses letters for numbers I don't know	151, 152, 153
		Write "I think of a number" expressions as number machines and algebra	151, 152, 153
		Work out an expression if I'm told what the numbers represent eg if $a = 2$ and $b = 4$, work out $2a + 3b$ (substitution)	780, 781
		Simplify expressions by collecting like terms eg $3a - 2b + 4a - 6b$	156
		term, expression, algebraic, order of operations, operation, evaluate, BODMAS, BIDMAS, number machine, substitute, collect like terms, simplify	
BGeom1	—	Angle facts: "angles around a point add to 360° "	812, 477 485, 480
		Angle facts: "angles on a straight line add to 180° "	
		Angle facts: "angles in a triangle add to 180° "	
		Angle facts: "Vertically opposite angles are equal"	
		Show a shape tessellates	
		Use a protractor to draw any angle (including reflex)	461
		Construct a triangle given two sides and the angle between them	683
		Construct a triangle given two angles and the side between them	683
vertex, angle, side, line segments, angle facts, calculate, triangle, angles at a point, angles in a triangle, vertically opposite angles, reason, tessellation, measure, construct, sketch			
BData1	—	Write a hypothesis	
		Know the difference between quantitative and qualitative data	393
		Draw and interpret line graphs	425
		Draw and interpret bar graphs, including with dual bars	425
quantitative (numerical) data, qualitative (non-numerical) data, hypothesis, line graph, bar chart, misleading graph, composite bar chart, comparative bar chart, dual bar chart, grouped data, extreme values, mode, modal group			

Number	Algebra	Geometry	Data	Revision	Total	
/	/	/	/	/	/	%

	HW	Objectives Spring	Hegarty Tasks
BNum2	—	Multiply a 3 digit by a 2 digit number	21
		Multiply a decimal by a whole number in my head	48
		Divide a 3 digit by a 2 digit number	22
		Divide a short decimal by a whole number in my head	49
		Round a number to the nearest 10, 100, 1000, million...	17
		Round a number to 1 or 2 decimal places	56
		Use rounding to work out a rough answer	131
		multiplication, division, round, power of 10, decimal place, estimate, integer	
BAlg2	—	Make equivalent equations	
		Explain the idea of balancing equations	
		Solve equations with two operations, eg $2x + 5 = 11$	177
		Solve equations with x on both sides, eg $4x - 2 = 3x - 1$	184
		unwrapping, inverse operation, balancing, equals, brackets	
BGeom2	—	Work out missing lengths on shapes made up of rectangles	
		Work out the area and perimeter of shapes made up of rectangles	550, 551, 555
		Work out the area of a parallelogram	556
		Work out the area of a triangle	557
		Work out the area of a trapezium	559
		Work out the area of compound shapes (made up of rectangles, triangles, parallelograms and trapeziums)	558
		area, square centimetre (etc), perimeter, length, centimetre (etc), rectangle, compound shape, triangle, parallelogram, trapezium, base, height, parallel sides	
BData2	—	Find the mean	405
		Find the mode and modal group	404
		Find the median for an even number of data values	409
		Use the averages and range to compare two sets of data	
		Decide which average is most useful	
		Work out the data values if I'm told the mode, median, mean and range	419,420
		average, mean, median, mode, modal, bimodal, trimodal, BIDMAS, hypothesis, range, data value, data sets	

Number	Algebra	Geometry	Data	Revision	Total	
/	/	/	/	/	/	%

	HW	Objectives Summer	Hegarty Tasks
BNum3	—	Find equivalent fractions	59
		Cancel fractions to their lowest terms	61
		Order fractions and place them on a number line	60
		Add and subtract fractions with different denominators	65, 66
		Write decimals as fractions eg 0.23, 0.05	73, 74
		fraction, denominator, numerator, equivalent, common denominator, terminating decimal	
BAlg3	—	Describe how to get the next term in a sequence	197
		Write a sequence if I'm told the first term and the pattern	
		Recognise which times table a sequence comes from	
		Write the 10 th , 100 th term of a sequence if I'm given the rule	
		Write a rule using algebra	198
		Recognise the variable and constant parts of a physical sequence	196
		Plot points on a coordinate grid that fit a rule $y = x + 3$	
		Plot lines such as $y = x$, $y = -x$, $x = -1$, $y = 3$	205
		sequence, term, term-to-term rule, position-to-term rule, expression, general term, n th term, pattern, constant, variable, change, same, rule, symbols, difference, vertex, vertices	
BRatio3	—	Find equivalent ratios	329
		Split an amount in a ratio	332, 333
		Understand the difference between ratio (part-to-part) and proportion (part-to-whole)	
		proportion, equivalent ratio, simplest form	
BGeom3	—	Know the vocabulary of 3D shapes (face, vertex, vertices, edges)	829, 830
		Sketch the net for any 3-D shape	833
		Create or sketch a 3D shape from a net	836
		Draw the plan, front and side elevation for a 3-D shape,	837, 838
		Make a 3D shape from the plan, front and side elevations	841
		face, vertex, vertices, edge, 2D shape, 3D solid, prism, cuboid, tetrahedron, net, cube sketch, isometric, view, plan view, front view, side view, elevations, sketch	
BData3	—	Say which situations have equally likely outcomes	
		Use the probability scale from 0 to 1 and place events on it	350
		Write the probability of an event as a fraction	351
		Estimate probability from an experiment	356
		Compare expected results with an experiment	355
		event, probability, impossible, certain, likely, unlikely, even chance, 50-50, equally likely, probability scale, chance, random, possible, outcome, experiment, frequency table, theoretical probability, experimental probability, biased	

Number	Algebra	Geometry	Data	Revision	Total	
/	/	/	/	/	/	%