



Year 9 Mathematics Examination

The mathematics exam will be divided into two papers:

Paper 1: Calculator (45 minutes)

Paper 2: Non-calculator (45 minutes)

The following is a list of suggested revision activities:

Topic List		Revision Resources		
Topic and Blocks	Small Steps	Link to Recorded Lessons	Sparx Codes	
Reasoning with Algebra	1. Straight line graphs	R - Lines, parallel to the axes, $y=x$ and $y=-x$	https://vimeo.com/45282406 <u>1</u>	M797
		R - Using table of values	https://vimeo.com/45282435 <u>4</u>	U741
		Compare gradients	https://vimeo.com/45282456 <u>5</u>	U669
		Compare intercepts	https://vimeo.com/45282470 <u>8</u>	U477
		Understand and use $y=mx+c$	https://vimeo.com/45434161 <u>1</u>	M888
		Write an equation in the form $y=mx+c$	https://vimeo.com/45434150 <u>1</u>	U669
		Find the equation of a line from a graph	https://vimeo.com/45434133 <u>9</u>	U315
		Interpret gradient and intercepts of real-life graphs	https://vimeo.com/45434123 <u>9</u>	M205
		Model real-life graphs involving inverse proportion	https://vimeo.com/45575473 <u>4</u>	U862
		Explore perpendicular lines	https://vimeo.com/45575495 <u>2</u>	U898
	2. Forming and solving equations	R - Solve one and two-step equations and inequalities	https://vimeo.com/45575667 <u>0</u>	M855
		R - Solve one and two-step equations and inequalities with brackets	https://vimeo.com/45575691 <u>1</u>	M509
		Inequalities with negative numbers	https://vimeo.com/45771420 <u>2</u>	U759
		Solve equations with unknowns on both sides	https://vimeo.com/45771528 <u>9</u>	M554
		Solve inequalities with unknowns on both sides	https://vimeo.com/45771633 <u>6</u>	M732
		Solving equations and inequalities in context	https://vimeo.com/45771636 <u>0</u>	M732
		Substituting into formulae and equations	https://vimeo.com/45888594 <u>8</u>	M208
		Rearranging formulae (one-step)	https://vimeo.com/45889999 <u>1</u>	M184



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Constructing in 2 and 3 dimensions		Rearranging formulae (two-step)	https://vimeo.com/45888622 <u>6</u>	M184
		Rearrange complex formulae including brackets and squares	https://vimeo.com/45888644 <u>3</u>	U556
	3. Testing Conjectures	R - Factors, multiples and primes	https://vimeo.com/46131109 <u>6</u>	M823
		True or false	https://vimeo.com/46131136 <u>7</u>	U582
		Always, sometimes, never true	https://vimeo.com/46131495 <u>2</u>	U582
		Show that	https://vimeo.com/46131514 <u>1</u>	U582
		Conjectures about number	https://vimeo.com/46131638 <u>1</u>	U582
		Expand a pair of binomials	https://vimeo.com/46131657 <u>0</u>	U582
		Conjectures with algebra	https://vimeo.com/46131919 <u>2</u>	U582
		Explore the 100 grid	https://vimeo.com/46131941 <u>7</u>	
		Expand three binomials	https://vimeo.com/60385546 <u>0</u>	U606
	4. Three-dimensional shapes	Know names of 2-D and 3-D shapes	https://vimeo.com/46813245 <u>0</u>	M276 & M767
		Recognise prisms	https://vimeo.com/46813262 <u>6</u>	M767
		Accurate nets of cuboids and other 3-D shapes	https://vimeo.com/46813278 <u>7</u>	M518
		sketch and recognise nets of cuboids and other 3-D shapes	https://vimeo.com/46846220 <u>9</u>	M884
		plans and elevations	https://vimeo.com/47168222 <u>4</u>	M229
		R - Find area of 2-D shapes	https://vimeo.com/47168228 <u>4</u>	M303
		Surface area of cubes and cuboids	https://vimeo.com/47168233 <u>5</u>	M534
		Surface area of triangular prisms	https://vimeo.com/47168240 <u>2</u>	M661
		Surface area of a cylinder	https://vimeo.com/47750696 <u>3</u>	M936
		Volume of cubes and cuboids	https://vimeo.com/47750742 <u>7</u>	M765
		Volume of other 3-D shapes - prisms and cylinders	https://vimeo.com/47751219 <u>3</u>	M722
		Explore volumes of cone, pyramids and spheres	https://vimeo.com/47751233 <u>2</u>	M697
	5. Const	R - Draw and measure angles	https://vimeo.com/48159561 <u>0</u>	M331



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Reasoning with Number	6. Numbers	R - Construct and interpret scale drawings	https://vimeo.com/48159563 8	M112
		Locus of distance from a point	https://vimeo.com/48159569 6	U678
		Locus of distance from a straight line/shape	https://vimeo.com/48159569 8	U678
		Locus of points equidistant from two points	https://vimeo.com/48397098 0	U678
		Construct a perpendicular bisector	https://vimeo.com/48397115 1	U787
		Construct a perpendicular from a point	https://vimeo.com/48397129 3	U245
		Construct a perpendicular to a point	https://vimeo.com/48397137 6	U979
		Locus of distance from two lines	https://vimeo.com/48397149 3	U820
		Construct an angle bisector	https://vimeo.com/48587975 9	M232
		R - Construct triangles from given information	https://vimeo.com/48587980 4	M565
		Identify congruent figures	https://vimeo.com/48587990 2	U790
		Explore congruent triangles	https://vimeo.com/48589211 9	U866
		Identify congruent triangles	https://vimeo.com/48588003 4	U866
		Integers, real and rational numbers	https://vimeo.com/49042280 8	U417
	7. Using	Understand and use surds	https://vimeo.com/49114304 9	U338
		R - Work with directed number	https://vimeo.com/49042361 8	
		Solve problems with integers	https://vimeo.com/49114315 6	U417
		Solve problems with decimals	https://vimeo.com/49114319 3	U478
		R - HCF and LCM	https://vimeo.com/49114322 1	U529
		R - Adding and subtracting fractions	https://vimeo.com/49114328 2	U736
		R - Multiplying and dividing fractions	https://vimeo.com/49114463 8	U475
		Solving problems with fractions	https://vimeo.com/49042446 8	U874
		R - Numbers in standard form	https://vimeo.com/49114331 7	U330
		R - Use the equivalence of fractions, decimals and percentages	https://vimeo.com/49930212 6	U888



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Reasoning with Geometry		R - Calculate percentage increase and decrease	https://vimeo.com/49930252 8	U773
		R - Express a change as a percentage	https://vimeo.com/49930289 9	U286
		Solve 'reverse' percentage problems	https://vimeo.com/49930328 0	U286
		Recognise and solve percentage problems (non-calc)	https://vimeo.com/49930381 2	U773
		R - Recognise and solve percentage problems (calc)	https://vimeo.com/49930423 6	U671
		Solve problems with repeated percentage change	https://vimeo.com/49930468 7	U278
	8. Maths and Money	Solve problems with bills and bank statements	https://vimeo.com/50296199 4	U988
		Calculate simple interest	https://vimeo.com/50271823 1	U533
		Calculate compound interest	https://vimeo.com/50271986 8	U332
		Solve problems with VAT	https://vimeo.com/50272140 1	M476
		Calculate wages and taxes	https://vimeo.com/50561170 0	M901
		Solve problems with exchange rates	https://vimeo.com/50561262 5	U610
		Solve unit pricing problems	https://vimeo.com/50561324 3	M901
	9. Deduction	R - Angles in parallel lines	https://vimeo.com/50989452 1	U826
		Solving angles problems (using chains of reasoning)	https://vimeo.com/50989483 4	U655
		Angles problems with algebra	https://vimeo.com/50989514 3	U655
		Conjectures with angles	https://vimeo.com/50989568 4	U390, U730, U628, U732
		Conjectures with shapes	https://vimeo.com/51522072 9	U121
		Link constructions and geometrical reasoning	https://vimeo.com/51522169 8	U979
	10. Rotation and Translation	Identify the order of rotational symmetry of a shape	https://vimeo.com/51674971 3	M523
		Compare and contrast rotational symmetry with line symmetry	https://vimeo.com/51675006 0	M523
		Roatate a shape about a point on a shape	https://vimeo.com/51675030 4	M910
		Roatate a shape about a point not on a shape	https://vimeo.com/51861561 7	M910
		Translate points and shapes by a given vector	https://vimeo.com/51861883 7	M139



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	Compare rotation and reflection of shapes	https://vimeo.com/51862228 <u>3</u>	
	Find the result of a series of transformations	https://vimeo.com/51861568 <u>0</u>	