Royal Mathematical School
3rd Form SoW
2018-2019

Mod 1

RMS 3rd Form	Factors and powers (Chapter 1)
Write the prime factor decmposition of a number	
Use prime factor decomposition to find the HCF and LCM of two numbers	
Work out the laws of indices for positive powers	
Show that any number to the power of zero is 1	
Use the laws of indices for multiplying and dividing	
Use and understand powers of 10	
Use the prefixes associated with powers of 10	
Understand the effect of multiplying by an integer power of 10	
Calculate with powers	
Round to a number of significant figures	

Mod 2

RMS 3rd Form	Working with powers (Chapter 2)
Simplify expressions involving powers and brackets	
Understand the meaning of an identity	
Use the index laws in algebraic calculations an expressions	
Write and simplify epressions involving brackets and powers	
Factorise an algebraic expression	
Substitute integers into expressions	
Construct and solve equations	

Mod 3

RMS 3rd Form	2d shapes and 3d solids (Chapter 3)
Use 2d representations of 3d solids	
Sketch nets of 3d solids	
Calculate the surface area of prisms	
Name different parts of the circle	
Calculate the circumference	
Calculate the radius or diameter when you know the circumference	
Calculate the area of a circle	
Calculate the radius or diameter when you know the area	
Calculate the volume and surface area of a cylinder	
Use Pythagoras' Theorem in right-angled triangles	

Mod 4

RMS 3rd Form	Fractions, decimals, percentages (Chapter 6)
Recognise fractional equivalents to some recurring decimals	
Change a recurring decimal into a fraction	
Calculate percentages	
Work out an original quantity before a percentage increase or decrease	
Calculate percentage change	
Calculate the effect of repeated percentage change	

Mod 5

RMS 3rd Form	Constructions and Loci (Chapter 7)
Draw triangles accurately using a ruler and protractor	
Draw triangles to scale	
Draw accurate nets of 3d solids	
Construct triangles using ruler and compasses	
Construct nest of 3d solids using ruler and compasses	
Bisect a line using a ruler and compasses	
Construct perpendicular lines using a ruler and compasses	
Bisect angles using a ruler and compasses	
Draw accurate diagrams to solve problems	
Draw a locus	
Use loci to solve problems	

Mod 6

RMS 3rd Form	*Real life graphs (Chapter 4)*
Recognise when graphs are in direct proportin	
Plot graphs and read values to solve problems	
Interpret graphs from different sources	
Understand financial graphs	
Draw and interpret distance time graphs	
Use distance time graphs to solve problems	
Interpret graphs that are curved	
Interpret real life graphs	
Understand when graphs are misleading	

Mod 7

RMS 3rd Form	*Transformations (Chapter 5)*
Describe and carry out translations	
Describe and carry out reflections	
Describe and carry out rotations	
Enlarge a shape	
Describe an enlargement	
Enlarge a shape with a negative scale factor	
Enlarge a shape with a fractional scale factor	
Transform 2D shapes using a combination of reflection, rotation, enlargement and translation	
Identify planes of reflection symmetry in 3D solids	
Find the perimeter and area of 2d shapes after enlargements	
Find the volume of 3d shapes after enlargements	

Mod 8

RMS 3rd Form	*Constructions and Loci (Chapter 7)*
Draw triangles accurately using a ruler and protractor	
Draw triangles to scale	
Draw accurate nets of 3d solids	
Construct triangles using ruler and compasses	
Construct nest of 3d solids using ruler and compasses	
Bisect a line using a ruler and compasses	
Construct perpendicular lines using a ruler and compasses	
Bisect angles using a ruler and compasses	
Draw accurate diagrams to solve problems	
Draw a locus	
Use loci to solve problems	

Mod 9

RMS 3rd Form	*Probability (Chapter 8)*
Calculate and compare probabilities	
Decide if a game is fair	
Identify mutually exclusive outcomes and events	
Find the probabilities of mutually exclusive outcomes and events	
Find the probability of an event not happening	
Calculate the relative frequency of a value	
Use relative frequency to make estimates	
Use relative frequency to estimate the probability of an event	
Use estimated probability to calculate expected frequencies	
Carry out a probability experiment	
Estimate probability using data from an experiment	
Work out the expected results when an experiment is repeated	
List all the possible outcomes of one or two events in sample space diagram or Venn diagrams	
Calculate probabilities of repeated events	
Use tree diagrams to find the probabilities of two or more events	

Mod 10

RMS 3rd Form	Graphs (Chapter 10)
Plot straight-line graphs	
Find the y-intercept of a straight liine graph	
Find the gradient of a straight-line graph	
Plot graphs using the gradient and y-intercept	
Use y = mx + c	
Find the equation of a straight-line graph	
Identify parallel and perpendicular lines	
Find the inverse of a linear function	
Plot and use non-linear graphs	

Mod 11

RMS 3rd Form	Scale drawings and measures (Chapter 9)
Use scales in maps and plans	
Use and interpret maps	
Measure and use bearings	
Draw diagrams to scale using bearings	
Draw diagrams to scale	
Use and interpret scale drawings	
Identify congruent and similar shapes	
Use congruence to solve problems in triangles and quadrilaterals	
Use similarity to solve problems in 2d shapes	