Park House School - Year 11 Mock 2

Maths Assessment Manifest

- You will have 3 Maths papers
- Each paper will be 80 marks
- Each paper will be 90 minutes
- You are expected to spend 1 minute on each mark and then 10 minutes checking your answers.

Foundation Tier Checklist

Number

Topics	Red	Amber	Green
I can find primes, factors and multiples			
I can express a number as a product of prime factors			
I can find the highest common factor and lowest common multiple of numbers			
I can complete calculations involving + - x and ÷			
I understand the value of each digit in a number			
I can work out calculations using the order of operations			
I can use a calculator in calculations			
I can convert between fractions, decimals and percentages			
I can add/subtract/multiply/divide fractions			
I can round numbers and estimate calculations by rounding to 1sf			
I can find the error interval of a number and find the upper and lower bounds			
I can find squares, square roots, cubes and cube roots of numbers			
I can simplify expressions involving indices			
I can find the reciprocal of a number			
I can change between standard form and ordinary numbers			
I can answer problems involving standard form			

Algebra

Topics	Red	Amber	Green
I can simplify algebraic expressions			
I can substitute numbers into algebraic expressions and equations			
I can change the subject of a formula			

I can expand a single bracket			
I can expand double brackets			
I can factorise an expression into a single bracket			
I can factorise quadratics into double brackets			
I can read and draw inequalities			
I can solve inequalities			
I can give examples that verify an assumption and give counter examples to proof that an assumption is wrong			
I can plot and read coordinates in all 4 quadrants			
I can draw straight line graphs and read the gradient and y-intercept off a graph			
I can plot quadratic, cubic and reciprocal graphs			
I can use a function machine to find the input and the output			
I can solve linear equations			
I can form and solve linear equations			
I can solve a pair of simultaneous equations			
I can solve quadratics by factorising			
I can find the next term and nth term of linear sequences			
I can find the next term in geometric sequences and special sequences			

Ratio and proportion

Topics	Red	Amber	Green
I can write a sentence as a ratio, simplify ratios and find equivalent ratios			
I can share amounts into a ratio			
I can find quantities in a ratio when given one ratio or the difference			
I can find percentages of amounts with and without a calculator			
I can increase/decrease numbers by a percentage and calculate percentage change			
I can calculate simple interest, compound interest and depreciation			
I can answer reverse percentage problems			
I can answer value for money problems			
I can answer ingredients problems			
I can calculate conversions and use conversion graphs			
I can answer problems involving direct and inverse proportion			
I can use exchange rates to calculate currency conversions			

Geometry

Topics	Red	Amber	Green
I can find missing angles on a straight line, around a point, in triangles and in quadrilaterals			
I can find missing angles in parallel lines			
I can find missing angles in polygons			
I can draw and measure bearings and answer bearing problems			
I can answer problems involving speed, distance and time			
I can answer problems involving density, mass and volume			
I can answer problems involving force, pressure and area			
I can transform shapes using reflection, rotation, translation and enlargement			
I can describe the transformations that have taken place			
I can answer problems involving column vectors			
I can answer problems where I have to use Pythagoras theorem			
I can find missing sides of a triangle using trigonometry			
I can find missing angles of a triangle using trigonometry			
I can use a compass to perform constructions and loci			
I know the properties of 2D and 3D shapes			
I can find the area and perimeters of shapes			
I can find the area and circumference of circles and parts of circles			
I can find the volumes of prisms and cylinders			
I can find the surface areas of cuboids, triangular prisms and cylinders			

Probability

Topics	Red	Amber	Green
I can use the probability scale			
I can calculate the probability of an event happening			
I can calculate the probability of an event not happening			
I can list the outcomes of an event			
I can use a sample space diagram to find the probabilities of an event happening			
I can calculate the relative frequency			
I can calculate the experimental probabilities			
I can use probability tree diagrams to calculate probabilities			
I can complete a Venn diagram and use it to calculate probabilities			

Statistics

Topics	Red	Amber	Green

I can calculate averages from a list			
I can calculate averages from frequency tables and grouped data			
I can complete a tally charts			
I can draw and interpret pictograms			
I can draw and interpret bar charts, composite bar charts and dual bar charts			
I can plot points on scatter graphs, describe correlation and relationship, draw line of best fit and use it to calculate values			
I can draw and interpret line graphs			
I can draw and interpret pie charts			
I can represent information in a two way table			

Higher Tier Checklist

Number

Topics	Red	Amber	Green
I can express a number as a product of prime factors			
I can find the highest common factor and lowest common multiple of numbers			
I can complete calculations involving +, -, x or ÷ with whole numbers or decimal numbers			
I can simplify surds			
I can add and subtract surds			
I can expand brackets with surds			
I can rationalise surds			
I can +, -, x or ÷ fractions including mixed numbers			
I can turn between recurring decimals and fractions			
I can use of a calculator to find the answers to calculations			
I can estimate answers by rounding to 1 significant figures or nice numbers			
I can find the error interval of a rounded or truncated number			
I can find upper and lower bounds of a number			
I can find the answer to a calculation to a suitable degree of accuracy by considering bounds			
I can simplify expressions with fractional and negative indices			
I can change between standard form and ordinary numbers			
I can answer problems involving standard form			
I can answer capture-recapture problems			

Algebra

Topics	Red	Amber	Green

I can expand single, double and triple brackets and simplify them			
I can factorise expressions into single brackets			
I can change the subject of a formula with one or two unknowns			
I can complete the square on a quadratic			
I can simplify algebraic fractions			
I can solve equations involving algebraic fractions			
I can answer problems involving composite and inverse functions			
I can answer algebraic proof problems			
I can draw straight line graphs			
I can find the equation of a drawn line and find the equation of a line between two points			
I can find parallel and perpendicular lines and answer problems involving them			
I can plot quadratic, cubic and reciprocal graphs and find the turning points and roots of them			
I can calculate the gradient of a curve by drawing a tangent to it			
I can understand graph transformations and can use them in problems			
I can graph linear inequalities and shade the region which satisfies all of them			
I can solve quadratic inequalities			
I can find the equation of a circle and tangents to a circle			
I can solve linear equations			
I can form and solve linear equations			
I can solve linear simultaneous equations			
I can solve quadratic simultaneous equations			
I can solve quadratics by factorising			
I can solve quadratics by using the quadratic formula			
I can solve quadratics by completing the square			
I can use iteration to calculate approximate answers to problems			
I can find the next term and nth term of linear sequences			
I can find the next term and nth term of a quadratic sequence			
I can find the next term and nth term of geometric and exponential sequences			
I can answer problems using recursive and special sequences			

Ratio and Proportion

Topics	Red	Amber	Green
I can find equivalent ratios and write ratios in the form as 1:n			

	Red	Amber	Green
I can share amounts into a ratio			
I can find quantities in a ratio when given one ratio or the difference			
I can add and combine ratios			
I can find percentages of amounts with and without a calculator			
I can increase/decrease numbers by a percentage and calculate percentage change			
I can calculate simple interest, compound interest and depreciation			
I can answer reverse percentage problems			
I can answer value for money problems			
I can answer ingredients problems			
I can calculate conversions and use conversion graphs			
I can answer problems involving direct and inverse proportion			
I can use exchange rates to calculate currency conversions			

Geometry

Topics	Red	Amber	Green
I can find missing angles on parallel lines			
I can find missing angles in polygons			
I can find missing angles by using circle theorems			
I can draw and measure bearings and answer bearing problems			
I can answer problems involving speed, distance and time			
I can calculate information from speed, distance, time graphs			
I can calculate information from velocity time graphs			
I can calculate the area under a graph			
I can answer problems involving density, mass and volume			
I can answer problems involving force, pressure and area			
I can convert between compound measures			
I can transform shapes using reflection, rotation, translation and enlargement			
I can describe the transformations that have taken place			
I can perform a fractional or negative enlargement			
I can answer problems involving vectors and vector proof			
I can answer problems involving Pythagoras theorem in 2D or 3D			
I can use SOHCAHTOA to find missing lengths or angles in right angled triangles			
I know my exact trigonometric values			
I can use the sine rule, cosine rule and area of a triangle to find missing angles and lengths			

	Red	Amber	Green
I know the shape and properties of trigonometric graphs			
I can use a compass to perform constructions and loci			
I can find the area and perimeters of shapes			
I can find the area and circumference of circles and parts of circles			
I can find the volumes of prisms and cylinders			
I can find the surface area of prisms and cylinders			
I can find the volume and surface area of pyramids, cones and spheres			
I can find missing lengths, areas and volumes in similar shapes			
I know how to prove if shapes are congruent or similar			

Probability

Topics	Red	Amber	Green
I can calculate relative frequency, experimental and theoretical probabilities			
I can use probability tree diagrams to calculate the probability of events happening			
I can answer problems involving conditional probability			
I can draw Venn diagrams and use this to calculate probabilities			
I can use the product rule for counting			

Statistics

Topics	Red	Amber	Green
I can find averages from frequency tables and grouped data			
I can find upper and lower quartile and interquartile range from a list of numbers, box plots and cumulative frequency			
I can represent data in a two-way tables			
I can draw and interpret pie charts			
I can plot points on a scatter graphs, describe the correlation and relationship, draw the line of best fit and use the line of best fit to calculate values			
I can construct and compare box plots			
I can draw and read information from a cumulative frequency curves			
I can draw and interpret histograms			
I can estimate the median from a histogram			