Year 8 Higher Revision List - April 2019

Objective	Hegarty Maths Clip	Objective	Hegarty Maths Clip
Find common factors and common multiples of two numbers	27/33	Understand that premature rounding can cause problems when undertaking calculations with more than one step	132
Know the square numbers up to 15x15 and their corresponding roots	99/101	Use inequality notation to specifiy simple error intervals due to truncation or rounding	134
Estimate roots of any given positive number	112	Calculate upper and lower bounds	137
Identify prime numbers	28	Calculate speed, distance or time, given the other two	716-724
Write a number as the product of its prime factors	29	Calculate density, mass or volume, given the other two	725-731
Find the HCF and LCM of two numbers	32/35	Calculate the perimeter of a shape made from triangles, rectangles and other quadrilaterals where some of the values required must be calculated.	551
Write a surd in its simplest form	115	Know, understand and use the formula for finding the circumference of a circle.	534
Change between numbers in standard form and ordinary numbers	112/123	Calculate the perimeter of a semi-circle.	536
Multiply and divide numbers written in standard form	125/126	Calculate the perimeter of a quadrant.	544
Add and subtract numbers written in standard form	127	Calculate the length of an arc.	544
Recognise the sequences of **triangular**, square and cube numbers and the Fibonacci sequence, and use the term-to-term rule to generate further terms.	261	Find the perimeter of a sector.	545
Identify whether a term will appear in a sequence, and explain your answer.	197	Understand and use function notation.	288
Generate the terms of a **linear** sequence using the **position**-to-term rule.	198	Find the value of a function at a given point.	288
Find the nth term of a **linear** sequence.	198	Find the inverse function	295
From the numerical sequence generated from a series of patterns, find the nth term.	198	Solve two-step linear equations, e.g. 2x + 1 = 7, where the answers are positive integers.	179
Use algebraic notation and symbols correctly.	151	Solve all multi-step linear equations, leaving answers as fractions where appropriate	180/181/ 182
Understand the vocabulary of algebra, including the words term and factor.	151	Solve linear equations involving brackets, e.g. 3(2x - 4) = 6.	179
Understand that algebraic operations follow the same conventions and order as arithmetical operations.	152	Solve linear equations where the unknown appears on both sides.	184
Simplify expressions involving one variable by collecting like terms.	156	Solve two linear simultaneous equations algebraically where no multiplication is needed.	190
Simplify expressions involving more than one variable by collecting like terms.	157	Solve two linear simultaneous equations algebraically where multiplication is needed.	191
Multiply a number by a bracket.	160	Translate a 2d shape when given a column vector	637/638
Multiply a single term by a bracket.	160	Describe the translation of a 2d shape using a column vector	637/638
Multiply two (or more) brackets by single terms and simplify the resulting expression.	161	Represent single column vectors graphically.	622
Factorise an expression by taking out a common factor.	168	Identify the column vector from a diagram (single vector)	623
Fully factorise an expression by taking out common factors.	169	Multiply a column vector by a scalar and show this graphically.	626
Write expressions using powers.	173	Add two vectors numerically and show this graphically.	625
Simplify expressions involving the multiplication and division of indices.	173	Recognise and name polygons	822
Solve simple proportion problems using unitary method	339	Understand the terminology (e.g. regular, irregular, etc), notation (e.g. for parallel sides, equal, sides, etc) and properties relating to polygons.	822

Use proportion in real contexts (direct only).	339	Calculate and use angle sums of polygons	560
Reduce a ratio to its simplest form	329	Understand and use properties of angles on a straight line	477
Use ratio in relation to standard and compound units	330	Understand and use properties of vertically opposite angles	480
Use scale diagrams and maps	864	Understand and use properties of angles at a point	479
Relate ratios to fractions	330	Understand and use the angle sum of triangles, find missing angles in scalene triangles	485
Express a relationship between two quantities as a ratio or a fraction	330	Find missing angles in isosceles and equilateral triangles	486
Apply ratio to real contexts and problems (conversion, comparison, scaling, mixing, concentrations)	739	Identify parallel and perpendicular lines	821
Using equivalent ratios, find an unknown value when another is given.	331	Recognise which angles are equal on parallel lines	482
Divide a quantity in a given ratio.	332	Identify whether equal angles are alternate or corresponding on parallel lines.	481/483
Choose appropriate units for estimating or carrying out measurements	691	Solve problems using all angle and parallel line rules, giving reasons	488/489
Convert between units of measure in the same system	692	Understand and use three figure bearings to specify direction	492
Solve problems involving the addition and subtractions of units of measure.	714	Measure the bearing of a point B from a point A	492
Round to a given number of decimal places (including money)	56	Mark on a diagram the position of the point B given its bearing from point A	492
Round to any number of significant figures	130	Measure or draw a bearing between the points on a map or scaled plan	493
Estimate answers to calculations using approximation and rounding	131	Given the bearing of a point B from point A, work out the return bearing of A from B	494
		Use accurate drawings to solve bearing problems	495