

## Year 10 Foundation Plus Revision List - April 2019

<u>Objective</u>	<u>Hegarty Maths Clip</u>	<u>Objective</u>	<u>Hegarty Maths Clip</u>
Identify prime numbers	28	Use inequality notation to specify simple error intervals due to truncation or rounding	134
Write a number as the product of its prime factors	29	Calculate upper and lower bounds	137
Find the HCF and LCM of two numbers	32/35	Calculate speed, distance or time, given the other two	716-724
Calculate with roots and <b>positive integer</b> indices - including 'power to a power'	105/106/107	Calculate density, mass or volume, given the other two	725-731
Find the reciprocal of a number	71	Calculate pressure, force or area, given the other two	734-737
Change between numbers in standard form and ordinary numbers	112/123	Calculate the perimeter of a shape made from triangles, rectangles and other quadrilaterals where some of the values required must be calculated.	551
Multiply and divide numbers written in standard form	125/126	Know, understand and use the formula for finding the circumference of a circle.	534
Understand and use the standard form display on a calculator	128	Calculate the perimeter of a semi-circle.	536
Add and subtract numbers written in standard form	127	Calculate the perimeter of a quadrant.	544
Recognise the sequences of <b>triangular</b> , square and cube numbers and the Fibonacci sequence, and use the term-to-term rule to generate further terms.	261	Calculate the length of an arc.	544
Recognise <b>quadratic</b> sequences, and use the term-to-term rule to generate further terms.	247	Find the perimeter of a sector.	545
Recognise <b>simple geometric</b> sequences, and use the term-to-term rule to generate further terms.	264	Find the angle of a sector when given the length of the arc.	545
Identify whether a term will appear in a sequence, and explain your answer.	197	When given the input, find the output from a function.	288
Generate the terms of a <b>linear</b> sequence using the <b>position</b> -to-term rule.	198	When given the output, find the input for a function.	288
Find the nth term of a <b>linear</b> sequence.	198	Find the function, when given the input and output.	288
From the numerical sequence generated from a series of patterns, find the nth term.	198	Understand and use function notation.	288
Generate the terms of a <b>quadratic</b> sequence using the <b>position-to-term</b> rule.	248	Find the value of a function at a given point.	288
Use algebraic notation and symbols correctly.	151	Solve two-step linear equations, e.g. $2x + 1 = 7$ , where the answers are <b>positive integers</b> .	179
Understand the vocabulary of algebra, including the words term and factor.	151	Solve all multi-step linear equations, leaving answers as fractions where appropriate	180/181/182
Understand that algebraic operations follow the same conventions and order as arithmetical operations.	152	Solve linear equations involving brackets, e.g. $3(2x - 4) = 6$ .	179
Differentiate between expressions, equations, formulae, identities and inequalities. Be able to give examples of each.	154	Solve linear equations where the unknown appears on both sides.	184
Form expressions from written or diagrammatic contexts.	153	Derive a <b>linear</b> equation from a situation, solve and interpret the solution.	176
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	Derive two <b>linear</b> simultaneous equations from a situation, solve and interpret the solution.	195
Multiply a single term by a bracket.	160	Interpret a column vector	637/638
Multiply two (or more) brackets by single terms and simplify the resulting expression.	161	Describe movement using column vectors	637/638

Factorise an expression by taking out a common factor.	168	Translate a 2d shape when given a column vector	637/638
Fully factorise an expression by taking out common factors.	169	Describe the translation of a 2d shape using a column vector	637/638
Expand the product of two linear expressions of the form $x \pm n$ and simplify the resulting expression.	162	Represent single column vectors graphically.	622
Expand the product of two linear expressions of the form $ax \pm n$ and simplify the resulting expression.	163	Identify the column vector from a diagram (single vector)	623
Simplify expressions involving the multiplication and division of indices.	173	Multiply a column vector by a scalar and show this graphically.	626
Simplify expressions involving raising to a power with indices.	174	Add two vectors numerically and show this graphically.	625
Solve simple proportion problems using unitary method	339	Subtract two column vectors numerically and show this graphically.	625
Use proportion in real contexts (direct only).	339	Find the resultant of two (or more) given vectors.	626
Use proportion in real contexts (including inverse).	342	Understand the relationship between parallel vectors.	629
Recognise and interpret graphs that illustrate direct and inverse proportion	348	Calculate and use angle sums of polygons	560
Use ratio in relation to standard and compound units	330	Know and use the sum of the exterior angles in a polygon is $360^\circ$	563
Use scale diagrams and maps	864	Know and use the sum of the interior and exterior angles is $180^\circ$	562
Relate ratios to fractions	330	Find the number of sides of a regular polygon, given an interior or exterior angle	564
Express a relationship between two quantities as a ratio or a fraction	330	Understand and use properties of angles on a straight line	477
Apply ratio to real contexts and problems (conversion, comparison, scaling, mixing, concentrations)	739	Understand and use properties of vertically opposite angles	480
Using equivalent ratios, find an unknown value when another is given.	331	Understand and use properties of angles at a point	479
Divide a quantity in a given ratio.	332	Understand and use the angle sum of triangles, find missing angles in scalene triangles	485
Add, subtract, multiply and divide quantities of money, household finance, utility bills, shopping bills	744	Find missing angles in isosceles and equilateral triangles	486
Convert between units of measure in the same system	692	Identify parallel and perpendicular lines	821
Solve problems involving the addition and subtractions of units of measure.	714	Recognise which angles are equal on parallel lines	482
Round to a given number of decimal places (including money)	56	Identify whether equal angles are alternate or corresponding on parallel lines.	481/483
Round to any number of significant figures	130	Solve problems using all angle and parallel line rules, giving reasons	488/489
Estimate answers to calculations using approximation and rounding	131	Measure or draw a bearing between the points on a map or scaled plan	493
Understand that premature rounding can cause problems when undertaking calculations with more than one step	132	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