

## Year 10 AP3 Foundation Learn Sheet

Paper 1 (Non-calculator)					
Strand	Topic	R	A	G	Hegarty Clip
Number	Basic Operations and Order (BIDMAS)				18, 21, 22, 24
	Prime numbers				28
	Highest common factor				31
	Convert decimals to percentages				55
	Compare fractions and calculations				60, 66, 69
	Dividing fractions and whole numbers, fractions of amount				72, 77
	Powers, cubes and squares				100, 101
Algebra	Collect like terms				156
	Expand a single bracket				160
	Factorise simple expressions				168
	Solving linear equations				178, 179
Ratio, proportion, and rates of change	Share in a given ratio				332
	Mutually exclusive events				354
	Speed, Distance, Time				719, 721
	Recipe problems				739
	Money				752
Probability	Experimental probability and relative frequency				356
	Two-way tables				424
	Interpret a vertical line graph				425
	Converting measurements				692, 710
Geometry and measures	Angles around a point				812
	Complementary angles				815
	Properties of quadratic graphs				253, 255
	Vertically opposite angles, corresponding angles				480, 483
	Perimeter and area of a rectangle				550, 554
	Area, ratio and percentage problem solving				554, 328, 330, 149
	Area of a rectangle, money				554, 752
	Reflect a shape, describe a translation				639, 650
Plans and elevations				841, 842	

Paper 2 (Calculator)					
Strand	Topic	R	A	G	Hegarty Clip
Number	Arithmetic word problems				20, 23
	Factors of a number				27
	Multiple of a number				33
	Convert decimals to fractions				52
	Fraction of an amount				77
	Increase/Decrease by a fraction				78
	Percentages and two-way tables				87, 424
	Standard form conversion and comparison				122, 123, 124
	Complex calculations using a calculator				129
	Round to significant figures				130
Algebra	Substituting a value into a formula				155, 780
	Expand double brackets				163
	Factorise simple expressions				169
	Solve 2-step equations				179
	Straight line graphs				206
	Sequence of triangle numbers				261
	Compare quantities using ratios				328
Ratio, proportion, and rates of change	Mutually exclusive events and ratio				354
	Displaying sets in Venn diagrams				372
	Speed				717
	Money - change problems				747
	Percentage profit				760
	Statistics	Data collection sheets			
Mean from frequency tables					418
Drawing and interpreting bar charts					425
Interpret stem-and-leaf diagrams					430
Scatter diagrams					454
Area of a circle problem solving					540, 541
Geometry and measures	Perimeter of a rectangle				549
	Perimeter and algebra				552
	Interior angles in polygons problem solving				562, 824
	Parts of the circle				592
	Reflect a shape in a horizontal line				639
	Converting length				692
	Converting volume units				702

### Useful Revision websites

<https://www.mathsgenie.co.uk/gcse.html>  
<https://www.onmaths.com/>  
<https://corbettmaths.com/>

<http://studymaths.co.uk/>  
<http://hegartymaths.com>

## Year 10 AP3 Higher Learn Sheet

Paper 1 (Non-calculator)					
Strand	Topic	R	A	G	Hegarty Clip
Number	Highest common factor				31
	Multiplying mixed numbers				69
	Simplifying surds				115
	Estimate complex calculations				131
	Index form, round to significant figures, (power of negative integers)				102, 104, 130
	Multiplying and rationalising surds				114, 118
Algebra	Solving simultaneous equations using straight lines				219
	Completing the square				235
	Find the turning points of quadratic graphs				256
	Composite functions				294
	Inverse functions				295
	Share in a given ratio				332
Ratio, proportion, and rates of change	Recipe problems				739
	Direct algebraic proof				325, 327
	Ratio, percentage and fraction problem solving				328, 330
	Write ratios as fractions, solve quadratic equations				330, 233, 244
	Algebraic direct and inverse proportion				344, 346
Geometry and measures	Volume of compound shapes				582
	Perimeter and area of a rectangle				550, 554
	Reflect a shape, describe a translation				639, 650
	Plans and elevations				841, 842
	Non-calculator trigonometry				306, 845
Statistics	Systematic listing, product rule for counting				670, 671
	Calculate and compare median and upper and lower quartiles				409, 411
Probability	Mutually exclusive events				354
	Conditional probability				367

Paper 2 (Calculator)					
Strand	Topic	R	A	G	Hegarty Clip
Number	Convert an ordinary into standard form				122, 123
	Convert a number from standard form				123
	Compare numbers in standard form				124
	Complex calculations using a calculator				129
	Round to significant figures				130
Algebra	Expand double brackets				163
	Factorise simple expressions				169
	Solve equations with x on both sides				186
	Simplify algebraic fractions (involving quadratics)				229
	Find the nth term of a quadratic sequence				248
	Using a quadratic graph to solve an equation				260
	Direct algebraic proof (quadratics)				327
Ratio, proportion, and rates of change	Algebraic inverse proportion				346
	Instantaneous rate of change				890
	Write ratios as fractions				66, 69,
	Speed				717
Geometry and measures	Sine and cosine rules				522, 530
	Volume and surface area of a cone, sector of a circle				546, 577, 587
	Interior angles in polygons problem solving				562, 824
	Vectors - geometry problems with ratio				328, 633
	Enlarge a shape				644
	Converting volume units				702
	Density and mixtures				730
Probability	Mutually exclusive events				354
	Probability trees				361
Statistics	Mean from frequency tables				418
	Stem-and-leaf diagrams and box plots				430, 435
	Scatter diagrams				454

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<https://corbettmaths.com/>

<http://studymaths.co.uk/>  
<http://hegartymaths.com>