Y11 Strand	PLC
Gradients and Lines	1. Equations of lines parallel to the axis
	2. Plot straight line graphs
	3. Interpret y=mc+c
	4. Find the equations of a straight line from a graph
	5. Equation of a straight line graph given one point and a gradient
	6. Equation of a straight line graph given two points
	7. Determine whether a point is on a line
	8. Solve linear simultaneouys equations graphically
	9. (H) Explore perpendicular lines
	10. (H) Find the equations of perpendicular lines
Non- Linear Graphs	1. Plot and read from quadratics graphs
	2. Plot and read from cubic graphs
	3. Plot and read from reciprocal graphs
	4. Recognise graph shapes
	5. Identify and interpret roots and intercepts of quadratics
	6. (H) Understand and use exponential graphs
	7. (H) Find and use the equation of a circle centre 0
	8. (H) Find the equation of the tangent to any curve
Using graphs	1. Reflect shapes in given lines
	2. Construct and interpret conversion graphs
	3. Construct and interpret other real-life straight line graphs
	4. Interpret distance/time graphs
	5. Construct distance/time graphs
	6. Construct and iterpret speed/time graphs
	7. Construct and interpret piece-wise graphs
	8. Recognise and interpret graphs that illiustrate direct and inverse proportion
	9. Find approximate solutions to equations using graphs
	10. (H) Estimate the area under a curve
	1. Expand and factorise with a single bracket

Expanding and Factorising	2. Expand binomials
	3. Factorise quadratic expressions
	4. (H) Factorise complex quadratic expressions
	5. Solve equations equal to 0
	6. Solve quafratic equations by factorisation
	7. (H) Solve complex quadratic equations by factorisation
	8. (H) Complete the square
	9. (H) Solve quadratic equations using the quadratic formula
Changing the subject	1. Solve linear equations
	2. Solve inequalities
	3. Form and solve equations and inequalities in the context of shape
	4. Change the subject of a simple formula
	5. Change the subject of a known formula
	6. Change the subject of a complex formula
	7. (H) Change the subject where the subject appears more than once
	8. (H) Solve equations by iteration
Functions	1. Use function machines
	2. Substitute into expressions and formulae
	3. Use function notation
	4. (H) Work with composite functions
	5. (H) Work with inverse functions
	6. Graphs of quadratic functions
	7. (H) Solve quadratic inequalities
	8. Understand and use trig functions
Multiplicative reasoning	1. Use scale factors
	2. Understand direct proportion
	3. (H) Construct complex direct proportion equations
	4. Calculate with pressure and density
	5. Understand inverse rpoportion
	6. (H) Construct inverse proportion equation

	7. Ratio problems
Geometric reasoning	1. Angles at a point
	2. Angles in a prallel lines and shapes
	3. Exterior and interior angles in polygons
	4. Proving geometric facts
	5. Solve problems involving vectors
	6. (H) Review of circle theorems
	7. (H) Circle theorem - anlge between radius and chord
	8. (H) Circle theorem - angle between radius and a tangent
	9. (H) Circle theorem - two tangents from a point
	10. (H) Circle theorem - alternate segment theorem
	11. Pythagoras' theorem and trig ratios
Transforming and constructing	1. Perfomr and descirbe line symmetry and reflection
	2. Perform and descirbe rotation and rotational symmetry
	3. Perform and descirbe translations of shapes
	4. Perform and describe enlargements of shapes
	5. (H) Perform and describe negative enlargements of shapes
	6. (H) Identify invariant points and lines
	7. Perform standard constructions using ruler and protractor or ruler and compasses
	8. Solve loci problems
	9. (H) Understand and use trig graphs
	10. (H) Sketch and identify tranlatiosn of the graph of a given function
Listing and describing	1. Work with organised lists
	2. (H) Use the product rule for counting
	3. Sample spaces and probability
	4. Complete and use Venn diagrams
	5. Construct and interpret plans and elevations
	6. Use data to compare distributions
	7. Interpreting scatter graphs
	1. Show that with number

Show that…	2. Show that with algebra
	3. Show that with shape
	4. Show that with angles
	5. Show that with data
	6. (H) Show that with vectors
	7. Show that with congruent triangles
	8. (H) Form proof with congruent triangles

