

### Multiplicative Reasoning

- Use scale factors R
- Understand direct proportion
- Construct complex direct proportion equations H
- Calculate with pressure and density
- Understand inverse proportion
- Construct inverse proportion equations H
- Ratio problems

H denotes Higher Tier GCSE content  
R denotes Review step

### Geometric Reasoning

- Angles at points R
- Angles in parallel lines and shapes R
- Exterior and interior angles of polygons
- Proving geometric facts
- Solve problems involving vectors
- The first four circle theorems R H
- Angle between a radius and a chord H
- Angle between a radius and tangent H
- Two tangents from a point H
- Alternate segment theorem H
- Pythagoras' theorem and trigonometrical ratios R

### Algebraic Reasoning

- Simplify complex expressions
- Find the rule for the nth term of a linear sequence R
- Find the rule for the nth term of a quadratic sequence R H
- Use rules for sequences



### Algebraic Reasoning

- Solve linear simultaneous equations graphically R
- Solve simultaneous equations with one quadratic graphically  
R H
- Formal algebraic proof
- Inequalities in two variables H

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### Transforming and Constructing

- Perform and describe line symmetry and reflection R
- Perform and describe rotation/rotational symmetry R
- Perform and describe translations of shapes R
- Perform and describe enlargements of shapes R
- Perform and describe negative enlargements of shapes RH
- Identify transformations of shapes R
- Perform and describe a series of transformations of shapes
- Identify invariant points and lines H
- Perform standard constructions using ruler and protractor or ruler and compasses R
- Solve loci problems
- Understand and use trigonometrical graphs H
- Sketch and identify translations of the graph of a given function  
H
- Sketch and identify reflections of the graph of a given function  
H



### Listing and Describing

- Work with organised lists
- Use the product rule for counting H
- Sample spaces and probability R
- Complete and use Venn diagrams R
- Construct and interpret plans and elevations R
- Use data to compare distributions R
- Interpreting scatter diagram R

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### Show That

- 'Show that' with number
- 'Show that' with algebra
- 'Show that' with shape
- 'Show that' with angles
- 'Show that' with data
- 'Show that' with congruent triangles
- Formal proof with congruent triangles H