Mathematics

Multiplicative Reasoning – Direct & inverse proportion, density, pressure.

Geometric reasoning – Angles, parallel lines, polygons, circle theorems (H), Pythagoras, trigonometry.

$$a^2 + b^2 = c^2$$

Transformations – Transforming shapes, Trigonometric graphs (H).

Probability – Sample spaces, Venn diagrams, product rule (H), scatter graphs.

Graphs – Gradients, straight line graphs, perpendicular lines (H), non-linear graphs, circle equations (H), tangents (H).

Using Graphs – Conversion graphs, real life graphs, area under a graph (H).

Data – Collecting data, sampling, diagrams.

Non-Calculator Methods – Rational & irrational numbers, probability (H).
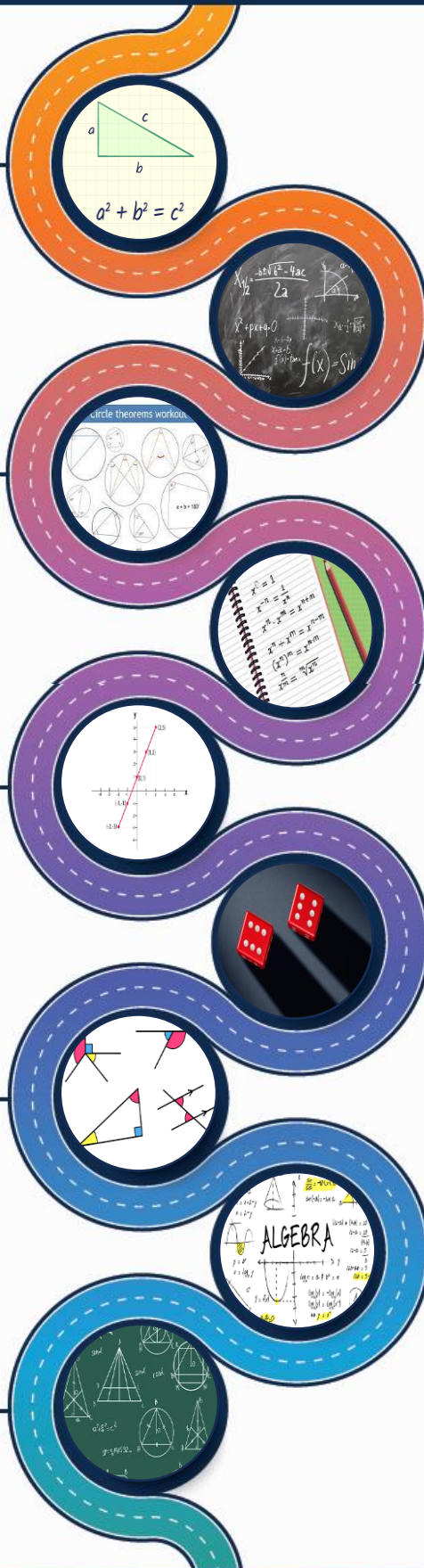
Angles & Bearings - Scale drawings, measure and read bearings.

Circles - Parts of circles, area, circles, cylinders, cones, spheres, circle theorems (H).

Congruence & Similarity - Scale factors, angles & enlargements.

Trigonometry - Use of ratios, Cosine and Sine rules (H).

Algebraic Manipulation – rearranging, iteration (H).

Functions – Composite and inverse functions, graphs of quadratic functions, quadratic inequalities (H).

Types of Number & Sequences – Factors, multiples, primes, nth term, quadratic sequences (H).

Indices & Roots – Rules of indices, standard form.

Manipulating Expressions – Algebraic fractions, form & solve equations and inequalities.

Vectors - Notation, drawing, proof (H).

Ratios & Fractions – Ratios & graphs.

Percentage & Interest – Compound interest, growth & decay, iteration.

Probability – Tree diagrams, Venn diagrams, conditional probability (H).

Equations & Inequalities - Straight line graphs, solving quadratics, quadratic inequalities (H).

Simultaneous Equations - Both linear, one quadratic (H).

10 & 11