



# Year 10 Crossover Mathematics Journey

**Career's linked to year 10 topics**  
 Data Scientist  
 Cryptographer  
 Engineering  
 Architect  
 Pilot

**Year 11**

**Prior Knowledge**  
 Constructions  
 Solving basic equations  
 Basic rearranging  
 Substitution

**Prior Knowledge**  
 Congruent shapes  
 Basic transformations  
 Squares & roots

**Prior Knowledge**  
 Reciprocals  
 Laws of indices  
 Order fractions  
 Estimate calculations  
 Ratio sharing  
 Exchange rates/best buys  
 Basic percentages

**Prior Knowledge**  
 Units of measure  
 Reading scales  
 Area/volume

**Prior Knowledge**  
 Frequency Polygons  
 Scatter graphs  
 Averages  
 Averages from tables  
 Basic Probability

**Prior Knowledge**  
 Expand/factorise  
 Simplify expressions  
 Negative numbers  
 Basic angle rules

**Term 1**

**Term 2**

Prep for Year 11      Year 10 Exams      Compound Measures

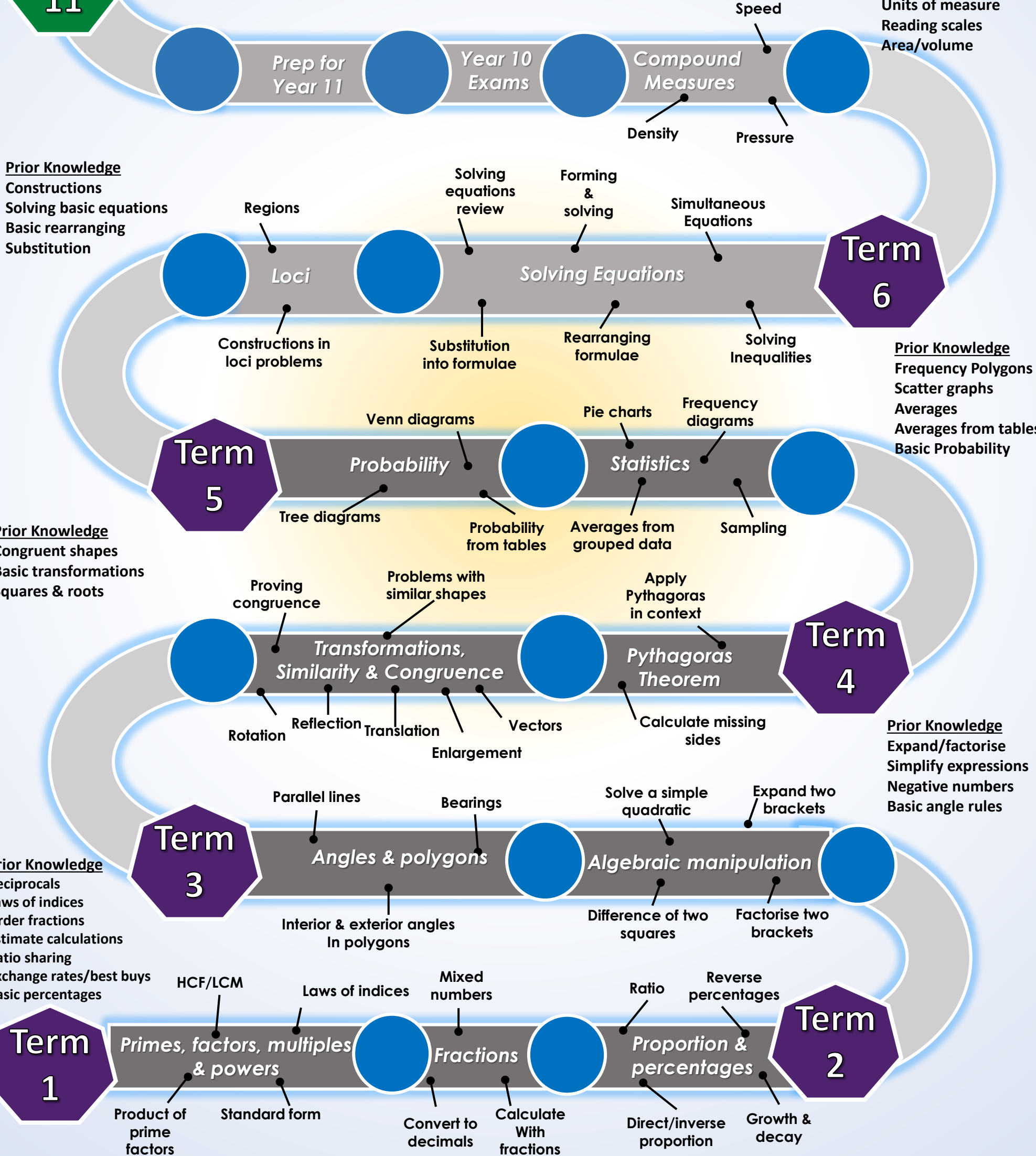
Loci      Solving Equations

Probability      Statistics

Transformations, Similarity & Congruence      Pythagoras Theorem

Angles & polygons      Algebraic manipulation

Primes, factors, multiples & powers      Fractions      Proportion & percentages



Speed  
 Density  
 Pressure

Regions  
 Solving equations review  
 Forming & solving  
 Simultaneous Equations

Constructions in loci problems  
 Substitution into formulae  
 Rearranging formulae  
 Solving Inequalities

Venn diagrams  
 Pie charts  
 Frequency diagrams  
 Tree diagrams  
 Probability from tables  
 Averages from grouped data  
 Sampling

Proving congruence  
 Problems with similar shapes  
 Apply Pythagoras in context  
 Rotation  
 Reflection  
 Translation  
 Enlargement  
 Vectors  
 Calculate missing sides

Parallel lines  
 Bearings  
 Solve a simple quadratic  
 Expand two brackets  
 Interior & exterior angles in polygons  
 Difference of two squares  
 Factorise two brackets

HCF/LCM  
 Laws of indices  
 Mixed numbers  
 Ratio  
 Reverse percentages  
 Product of prime factors  
 Standard form  
 Convert to decimals  
 Calculate with fractions  
 Direct/inverse proportion  
 Growth & decay