

# Mathematics

All students will sit a summative assessment at the end of each term to track progress – scores will be given as percentages. Throughout each term students will receive mini fluency quizzes once a fortnight to assess their knowledge and identify any gaps.

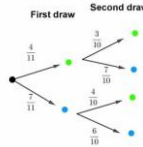
**Year 10**

**Skills**  
Draw and interpret a variety of graphs including time series, scatter graph, frequency polygon and stem and leaf diagrams

**End of Year Assessment**

**Presenting Data**

**Skills**  
Solve simultaneous equations graphically and algebraically



**Skills**  
Draw and use probability trees

**Understanding Risk**

By the end of term 3 students should be able to calculate the gradient of a line, solve a pair of simultaneous equations, draw a quadratic graph and use a tree diagram to list outcomes

**Solving Equations 2**

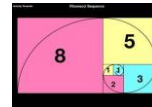
**Skills**  
Calculate gradients and solve problems with  $y=mx + c$ . Draw quadratic and cubic graphs.

**Algebraic Visualising**

**End of Term Assessment**

**Conjecturing**

**Skills**  
Apply knowledge of angle facts to problems. Work with similar and congruent shapes



By the end of term 2 students should be able to solve problems with similar shapes, write simple geometric proofs, calculate areas and perimeters using  $\pi$  and know and use Pythagoras' Theorem

**Calculating Space**

**Pattern Sniffing**

**Skills**  
Solve linear inequalities. Represent solutions on a number line and vice versa

**Skills**  
Calculate the nth term of a sequence. Investigate the Fibonacci sequence and begin to work with quadratics

**Solving Equations 1**

**End of Term Assessment**

**Proportional Reasoning**

**Skills**  
Work with direct and inverse proportion. Calculate with compound measures

By the end of term 1 students should be able to calculate with roots and indices, expand and factorise brackets, construct an angle and perpendicular line bisector and convert between compound units.

**Visualise and Construct**

**Algebraic Tinkering**

**Skills**  
Expanding and factorising brackets

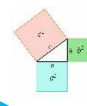
**YEAR 9**

**Calculating**

**Skills**  
Calculating with roots and indices. Using the 4 operations with standard form.



**Skills**  
Calculate arc lengths and area of sectors. Work with cylinders. Investigate and use Pythagoras' Theorem



$<$   $\leq$   $=$   
 $>$   $\geq$   $\neq$

