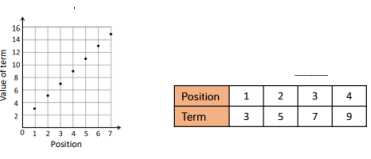
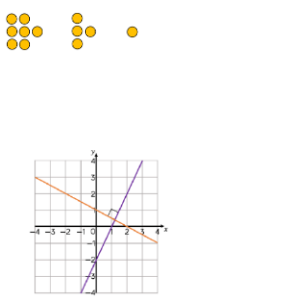
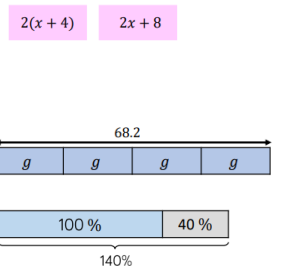
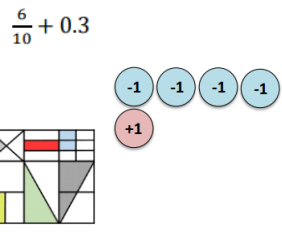


# Mathematics – 10 & 11 Foundation 23-24



**Autumn:**

**1. Algebra**

- Solving 1, 2 and 3 steps equations and inequalities
- Substitution
- Rearrange to change the subject
- Sequences and nth term

**2. Geometry**

- Angles (basic facts, angles in parallel lines, angles in polygons)

**Spring:**

**1. Interpreting Data**

- Averages and Range

**2. Perimeter, Area and Volume 1**

**3. Geometry**

- Coordinates
- Gradients and lines
- Drawing and interpreting linear/straight-line graphs

**Summer:**

**1. Transformation**

- Identify properties of and describe and sketch various types of Transformations (Translation, rotation, reflection, enlargement)

**2. Proportions and Proportional Change**

- Solving ratio and proportion problems
- Rates

10F

**Spring**

**1. Geometry and measures**

- Volume and Surface Area
- Pythagoras' Theorem
- Trigonometry

**Autumn 2.**

**Algebra (review)**

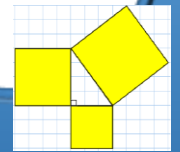
- Laws of Indices
- Expanding, factorising & solving quadratics
- Substitution
- Solving equations and Inequalities
- Changing the subject
- Simultaneous Equations

**Autumn:**

**1. Number (review)**

- Estimating
- Standard Form

11F



**Multiplicative Reasoning**

- Percentages
- Growth & Decay
- Compound Measures
- Direct and Inverse Proportion

**3. Reasoning with Right**

**–Angled Triangles**

- Pythagoras' Theorem
- Trigonometry

Spring 2.  
Ratio, Proportion and rates of change - review

Spring 2.  
**Probability - review**

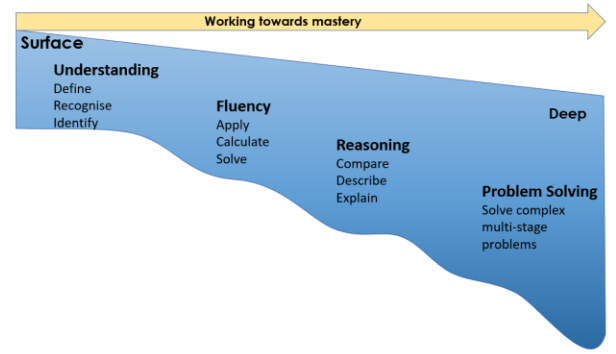
- Calculating and interpreting probabilities
- Decision / probability trees
- Venn Diagrams

Summer 1:  
**statistics Review**

Revision (exam practice)

Examinations

Core Maths



# Mathematics – 10 & 11 Higher 23-24

## Autumn:

### Proportional Reasoning

- Fractions
- FDP
- Percentages (including Simple Interest, Compound changes and general % change)
- Ratio
- Proportion (Including Best Buy, Currency, including graphs of proportion and algebraically  $y=kx$ )

### Angles and Bearings

Angles (basic facts, angles in parallel lines, angles in polygons)  
Bearings

## Spring:

### Surds

Simplifying Surds  
Expanding brackets with surds  
Rationalising surds

### Reasoning with right and non-right angled Triangles

- Pythagoras' Theorem
- Trigonometry
- (including making connections with ratio and Trig)
- Using Trig ratios (SOHCAHTOA)
- Using equilateral and right angled triangles to find exact trig values
- Sine and Cosine Rules
- General Area of triangle rule
- Pythag and Trig with Bearings
- Trig graphs

## Summer: Reasoning with Graphs

Linear graphs (including eq of graphs for parallel and perpendicular lines), Graphing rates of change

Real-life graphs, Line segments

Quadratic graphs, Cubic and reciprocal graphs,

## Spring Algebra

- Review Changing the subject
- Functions
- Iteration
- Expanding triple brackets
- Review Solving Quadratics (by factorising, completing sq, formula)
- Review Forming and solving Simultaneous Equations
- Review Equations of parallel and perpendicular lines
- Algebraic Fractions

## Autumn

### 2. Number

- Review Bounds in context
- Review – fractional and negative laws of indices
- Surds
- Recurring Decimals

## Autumn

### 1. Geometry

- Circle Theorems
- Loci and constructions
- Circle Geometry (tangent and radius)

## Geometry

- Area and Volume

## Quadratics

- Expanding and factorising (including when a is greater than 1)
- Expanding triple brackets
- Solving by factorising
- Completing the square and solve by completing the square
- Quadratic formula
- Simultaneous Equations (Linear and quadratics)
- Inequalities (linear and quadratics)

## Spring: Algebra and Graphs

- Gradients and lines
- Sketching and interpreting quadratics and cubic graphs

## Spring: Geometry

- Vectors
- Review Transformations
- Review Pythagoras' and Trigonometry in 3D
- Review Volume, S.A and Similarity

## Summer 1:

Review Statistics (Histogram, Box plot etc)

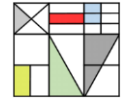
Revision (exam practice)

Examinations

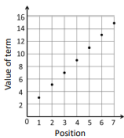
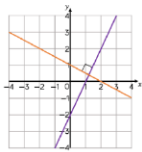
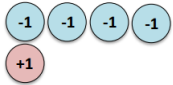
Core Maths  
A Level Maths  
Further Maths

10H

11H

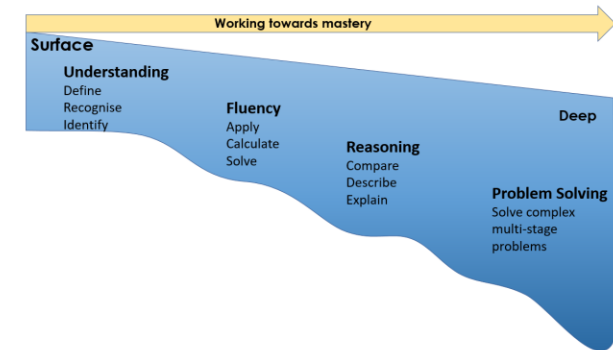
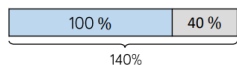
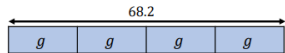


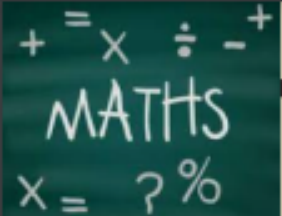
$$\frac{6}{10} + 0.3$$



Position	1	2	3	4
Term	3	5	7	9

$$2(x+4) \quad 2x+8$$





# "BUILDING YOUR LONG TERM MEMORY IN MATHS"



## BELL WORK BOOKLET

- FILLS THE GAPS WE IDENTIFIED IN YOUR KNOWLEDGE FROM YOUR ASSESSMENTS (DIAGNOSTICS & SYNOPTICS)

-GIVES YOU REPEATED PRACTICE OF THE SAME CONCEPTS OVER A PERIOD OF TIME

-HELPS YOU MASTER TOPICS I.E BECOME FLUENT BY BEING ABLE TO SOLVE MATHS PROBLEMS WITH GREATER ACCURACY & SPEED

## MATHS LESSONS

MATHS LEARNING JOURNEY / SCHEME OF WORK

-TOPICS ARE SEQUENCED SO THAT IT HELPS YOU MAKE BETTER CONNECTIONS BETWEEN CONCEPTS

STRUCTURE OF YOUR LESSONS

- MODEL EXAMPLES DONE BY YOUR TEACHER (INPUT / I DO)
- APPLICATION - YOU GET TO PRACTICE THE SKILL
- FEEDBACK - YOUR TEACHER HELPS YOU UNDERSTAND THE CORRECT PROCESS IN SOLVING THE MATHS PROBLEMS. GREEN PEN / RED PEN
- WHOLE CLASS FEEDBACK - GIVES YOUR ENTIRE CLASS A CHANCE TO REVIEW TOGETHER YOUR STRENGTHS & COMMON ERRORS OR MISCONCEPTIONS

## MATHS HOME LEARNING

-HW TASKS ALLOW YOU TO PRACTICE CONCEPTS LEARNT LAST YEAR - LAST TERM - LAST MONTH - LAST TWO WEEKS

(SPACED LEARNING HELPS YOU RETAIN INFORMATION LONGER AND WITH GREATER ACCURACY & SPEED)



HOME WORK. We use SPARX MATHS – this is a very good platform to help you SUCCEED at maths!  
WEEKLY TASKS! 100% completion