

Stage 10 Gradients and straight lines recapped constantly

Unit 1 – Sampling, Cumulative Frequency and Box Plots

Lesson 1 – understand sampling, its uses and limitations, use a sample to infer properties of a population

Lesson 2 – understand what the median and quartiles tell us and find for discrete data

Lesson 3 – calculate IQR and use to compare data sets.

Lesson 4 – draw a box plot and use to find median and IQR to compare distributions

Lesson 5 – understand cumulative frequency, complete a cumulative frequency table and interpret what it tells us

Lesson 6 – draw a cumulative frequency curve and interpret

Lesson 7 – use a cumulative frequency curve to find median and quartiles and draw a box plot

Unit 2 – Factorising harder quadratics

Lesson 1 – Recap factorising quadratics including the difference of two squares

Lesson 2 – factorise a quadratic of the form ax^2+bx+c

Lesson 3 – recap factorising and introduce solving a quadratic

Lesson 4 – Rearranging and solving

Lesson 5 – Solving using the formula

Lesson 6 – Quadratic Equations from Area problems

Unit 3 – Probability: Counting Strategies, Venn diagrams and two way table

Lesson 1 –Counting Strategies

Lesson 2 - use a Venn diagram to sort data in a probability problem

Lesson 3 – use a Venn diagram to answer probability problems

Lesson 4 – Independent tree diagrams

Lesson 5 – Dependent tree diagrams

Unit 4 – Histograms

Lesson 1 – Calculate Group width and Frequency Density

Lesson 2 – Draw Histograms

Lesson 3 – Interpret histograms

Lesson 4 – Averages from Histograms

UNIT 5 - PYTHAGORAS AND TRIGONOMETRY In 3D

Lesson 1 – Recap Pythagoras, inc worded

Lesson 2 – Recap Trig

Lesson 3 – Mixed Pythagoras and Trig questions

Lesson 4 – 3D Pythagoras

Lesson 5+6 – 3D Trig

Unit 6 – quadratic sequences

Lesson 1 – Generate a quadratic Sequence

Lesson 2 – be able to find the n th term of a quadratic sequence, calculate second differences, relate to ax^2 in table form

AP1

Unit 7 – Calculating with powers and Simplifying Surds

Lesson 1 – estimating squares, cubes, roots and cube roots of numbers

Lesson 2 – understand the meaning of a negative power and how to calculate. Learn what a power of zero means. Understand that 1 over in a power means a root Lesson 3 – calculate with negative or fractional powers

Lesson 4 – understanding surds and use in calculation, rules for multiplying and dividing

Lesson 5 – Simplify surds

Lesson 6 – adding and subtracting surds

Unit 8 – solve linear inequalities

Lesson 1 – recap inequalities and how to represent an inequality in two variables on a graph

Lesson 2 – represents inequalities in two variables as a region shaded on a graph

Lesson 3 – identify the inequalities from a region shaded on a graph

Lesson 4 – find sets of integer coordinates that that are solutions to a set of inequalities in two variables, from a graph

Unit 9 – Volume and Surface Area of 3D shapes

Lesson 1 – Basic Volume

Lesson 2 – Basic SA

Lesson 3 –Volume & SA of Spheres

Lesson 4 – Volume of Cones

Lesson 5 – Volume of Composite Shapes

Lesson 6 - Use 3D Pythagoras to find slant height and SA of cone

Lesson 7 – Use 3D Pythagoras to find slant height and SA of Pyramid

Lesson 8 – effect of enlargements on area and volume. Use of scale factors for length, area and volume

Lesson 9 – apply scale factors of enlargements to surface area and volume problems

Unit 10 – solving equations

Lesson 1 – Recap Simultaneous Equations

Lesson 2 – Worded Simultaneous Equations

Lesson 3+4 – Iteration

AP2

Unit 11 – circle theorems

Lesson 1 – starter to recap angle rules and definitions for a circle. First 4 Theorems

Lesson 2 – use of further circle theorems involving tangents

Lesson 3 – alternate angle segment

Lesson 4 – Exam Style Questions

Unit 12 – recurring decimals and growth and decay

Lesson 1 – Convert easy recurring decimals

Lesson 2 – Convert harder recurring decimals

Lesson 3 – recognise and set up problems involving compound interest and calculate using multipliers

Lesson 4 – calculate result of repeated percentage change/growth and decay problems

Unit 13 – combinations of transformations

Lesson 1-4 – recap on all four types of transformations (if needed)

Lesson 5 – Fractional and Negative Enlargements

Lesson 6 – Combinations of Transformations

Unit 14 – Gradients of Straight Lines

Lesson 1 – Recap reading gradient from $y=mx+c$ and calculating from two points

Lesson 2 – Gradients of parallel lines

Lesson 3 – Gradients of Perpendicular lines

Unit 15 – vectors

Lesson 1 – Column vector addition and subtraction

Lesson 2 – Drawing vectors and finding magnitudes

Lesson 3 – Algebraic vectors introduction

Lesson 4 – Exam Style questions