## Maths @ St Paul's

# My Personal GCSE Revision Tracker 

## Higher

# Use this to record your revision successes and targets from each revision booklet 

Name: $\qquad$

## Teachers Name:

$\qquad$

## Topics Covered in this booklet include:

Topic 1 Number concepts
Topic 2 Factors, multiples and primes
Topic 3 Simplifying and substitution
Topic 4 Solving equations
Topic 5 Fractions and decimals
Topic 6 Percentages
Topic 7 Standard form
Topic 8 Probability
Topic 9 Powers and roots
Topic 10 Perimeter, area and volume
Topic 11 Straight line graphs and real life graphs
Topic 12 Ratio
Topic 13 Collecting data
Topic 14 Averages and measures of spread
Topic 15 Rearranging formulae
Topic 16 Pythagoras and trigonometry
Topic 17 Quadratics
Topic 18 Circles
Topic 19 Angles and polygons
Topic 20 Simultaneous equations
Topic 21 Sequences
Topic 21A Revision of percentages
Topic 22 Displaying data
Topic 22B Revision of simplifying and substation
Topic 23 Solving equations and trial and improvement
Topic 24 Inequalities
Topic 25 Approximations
Topic 26 Surds
Topic 27 Transformations
Topic 27C Revision of real life graphs
Topic 28 Measures and speed, distance and time
Topic 29 Shapes, solids and symmetry
Topic 30 Proportionality
Topic 31 Loci and constructions
Topic 32 Congruency and similarity
Topic 33 Circle theorems
Topic 34 Trigonometry 2 and bearings
Topic 35 Transformations of graphs
Topic 36 Vectors
Topic 37 Functional number


## Stuck?

## Help is at hand!!!!



Buy a mathswatch DVD £4


Ask a friend


Look on the internet or in your books


## Teacher Marking

## 1: Excellent - may be a few small slips but work shows a solid understanding.

## 2: Homework shows that some aspects have been understood but others have not.

## 3: Homework shows many key misconceptions or a poor effort.

## Topic 1: Number Concepts

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | E $\rightarrow$ C | Basic Number |  |  |  |
| B | C | Deriving Unknown Facts |  |  |  |
| C | E $\rightarrow$ C | Problem Solving |  |  |  |

Topic 2: Factors, Multiples and Primes

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | E $\rightarrow$ C | Factors, Multiples and Primes |  |  |  |
| B | C/B | Prime Factor Decomposition, <br> HCFs and LCMs |  |  |  |

## Topic 3: Simplifying and Substitution

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | F/E | Substitution |  |  |  |
| B | D / C | Expanding and Simplifying |  |  |  |
| C | D $\rightarrow$ A | Factorising |  |  |  |
| D | A / A* | Algebraic Fractions |  |  |  |

Topic 4: Solving Equations

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | F $\rightarrow$ C | Solving Simple Linear <br> Equations |  |  |  |
| B | C | Forming and Solving <br> Equations |  |  |  |
| C | B $\rightarrow$ A* | Solving Harder Equations with <br> Fractions |  |  |  |

Topic 5: Fractions and Decimals

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | F | Fractions, Equivalence and <br> Amounts |  |  |  |
| B | D $\rightarrow$ B | $+-\times \div$ Fractions |  |  |  |
| C | D $\rightarrow$ B | Worded Problems |  |  |  |
| D | A/A* | Converting Recurring <br> Decimals to Fractions |  |  |  |

Topic 6: Percentages

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | E $\rightarrow$ C | Finding the New Amount |  |  |  |
| B | C | Finding the Percentage <br> Change |  |  |  |
| C | B | Finding the Original Amount |  |  |  |
| D | B / A | Repeated Percentage Changes |  |  |  |

Topic 7: Standard Form

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | B | Understanding Standard Form |  |  |  |
| B | B / A | $+-\times \div$ Using Standard Form |  |  |  |
| C | A | Problem Solving Using <br> Standard Form |  |  |  |
| D | B / A | Standard Form Using a <br> Calculator |  |  |  |

Topic 8: Probability

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | F $\rightarrow$ D | Calculating Probabilities and <br> Listing Outcomes |  |  |  |
| B | $\mathrm{F} \rightarrow$ C | Relative Frequency and <br> Expectation |  |  |  |
| C | $\mathrm{B} \rightarrow$ A* | Tree Diagrams |  |  |  |
| D | $\mathrm{B} \rightarrow$ A* | Problem Solving Using <br> Probability |  |  |  |

Topic 9: Powers and Roots

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | $\mathrm{F} \rightarrow$ C | Squares, Cubes, Roots and <br> Index Notation |  |  |  |
| B | $\mathrm{D} / \mathrm{C}$ | Using Index Laws |  |  |  |
| C | C $\rightarrow$ A $^{*}$ | Using Harder Index Laws |  |  |  |
| D | $\mathrm{E} \rightarrow$ C | Using your Calculator |  |  |  |

Topic 10: Perimeter, Area and Volume

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | E $\rightarrow$ C | Finding area |  |  |  |
| B | A | Area of non right-angled <br> triangles |  |  |  |
| C | C $\rightarrow$ A | Volume and surface area |  |  |  |

Topic 11: Straight Line and Real Life Graphs

| H/w | Grade | Objectives | Completed (Date) | Teacher Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | D / C | Plotting Straight Line Graphs |  |  |  |
| B | C / B | $y=m x+c$ |  |  |  |
| C | B / A | Parallel and Perpendicular Lines |  |  |  |
| D | D / C | Real Life Graphs |  |  |  |

Topic 12: Ratio

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | D / C | Sharing Amounts in a Given <br> Ratio |  |  |  |
| B | D $\rightarrow$ B | Problem Solving Using Ratio |  |  |  |
| C | D | Best Buys |  |  |  |

Topic 13: Collecting Data

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | D / C | Data Collection |  |  |  |
| B | D C | Two Way Tables |  |  |  |
| C | C $\rightarrow$ A | Random and Stratified <br> Sampling |  |  |  |

Topic 14: Averages and Measures of Spread

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | E $\rightarrow$ B | Statistics from Raw Data |  |  |  |
| B | B / A | Statistics from Tables |  |  |  |

Topic 15: Rearranging Formulae

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | D / C | Formulae and Substitution |  |  |  |
| B | D $\rightarrow$ B | Rearranging - Subject Appears <br> Once |  |  |  |
| C | B / A | Rearranging - Subject Appears <br> Twice |  |  |  |

Topic 16: Pythagoras and Trigonometry

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | C | Pythagoras' theorem |  |  |  |
| B | C/B | Co-ordinates |  |  |  |
| C | B | Trigonometry - finding <br> lengths |  |  |  |
| D | B | Trigonometry - finding angles |  |  |  |
| E | A / A* | Trigonometry in 3D |  |  |  |
| F | A / A* | Problem solving using <br> Pythagoras and trigonometry |  |  |  |

## Topic 17: Quadratic Equations

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | D / C | Plotting straight line graphs |  |  |  |
| B | C | Quadratic graphs |  |  |  |
| C | A / A* | Using an appropriate linear <br> graph |  |  |  |
| D | B / A | Factorising and Solving <br> Quadratics |  |  |  |
| E | A / A* | Quadratic Formula |  |  |  |
| F | A / A* | Completing the Square |  |  |  |
| G | A A* |  |  |  |  |

Topic 18: Circles

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | D / C | Circumference and area of <br> circles |  |  |  |
| B | A / A* | Arc length and sector area |  |  |  |
| C | C $\rightarrow$ A | Cylinders |  |  |  |
| D | A / A* | Cones |  |  |  |
| E | A / A* | Spheres |  |  |  |
| F | A / A* | Problem solving |  |  |  |

## Topic 19: Angles and Polygons

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | F $\rightarrow$ D | Angle facts |  |  |  |
| B | C | Angles and parallel lines |  |  |  |
| C | C | Angles in polygons |  |  |  |
| D | C / B | Geometric proofs |  |  |  |

Topic 20: Simultaneous Equations

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | B / A | Linear Simultaneous <br> Equations |  |  |  |
| B | A* $^{*}$ | One Linear and One Quadratic <br> Simultaneous Equations |  |  |  |

Topic 21: Sequences

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | D C | Using the $\mathrm{n}^{\text {th }}$ Term Formula |  |  |  |
| B | B $\rightarrow$ A* $^{*}$ | Problem Solving Using <br> Sequences |  |  |  |

## Topic 21A: Revision of Percentages

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment |
| :---: | :---: | :---: | :---: | :---: |
| A | D $\rightarrow$ A | Non-Calculator Percentage <br> Problems |  |  |
| B | D $\rightarrow$ A | Calculator Percentages <br> Problems |  |  |

Topic 22: Displaying and Interpreting Data

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | E $\rightarrow$ C | Pictograms, Bar Charts and <br> Frequency Diagrams |  |  |  |
| B | D / C | Pie Charts |  |  |  |
| C | D / C | Stem and Leaf Diagrams |  |  |  |
| D | B / A | Scattergraphs |  |  |  |
| E | B | Cumulative Frequency and <br> Box Plots |  |  |  |
| F | A / A* | Histograms |  |  |  |

Topic 22B: Simplifying and Substitution Revision

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | D $\rightarrow$ B | Simplifying |  |  |  |
| B | D $\rightarrow$ A | Factorising algebraic <br> expressions |  |  |  |
| C | A/A* | Algebraic Fractions |  |  |  |

Topic 23: Solving Equations and Trial and Improvement

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | D $\rightarrow$ B | Solving linear equations |  |  |  |
| B | A | Solving linear equations with <br> fractions |  |  |  |
| C | C | Trial and improvement |  |  |  |

Topic 24: Inequalities

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | D / C | Solving Linear Inequalities |  |  |  |
| B | B | Shading Regions |  |  |  |

## Topic 25: Approximations

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | E $\rightarrow$ C | Rounding |  |  |  |
| B | C | Estimating |  |  |  |
| C | C | Upper and Lower Bounds |  |  |  |
| D | B $\rightarrow$ A* | Problem Solving Using Bounds |  |  |  |

Topic 26: Surds

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | B / A | Simplifying Expressions <br> Involving Surds |  |  |  |
| B | A* | Expanding Brackets Involving <br> Surds |  |  |  |
| C | A/ A* | Rationalising The <br> Denominator |  |  |  |
| D | A* | Problem Solving Using Surds |  |  |  |

## Topic 27: Transformations

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | D / C | Translations |  |  |  |
| B | G $\rightarrow$ D | Reflections |  |  |  |
| C | D / C | Rotations |  |  |  |
| D | C $\rightarrow$ A | Enlargements |  |  |  |
| E | D $\rightarrow$ A | Transformations |  |  |  |

Topic 27C: Real Life Graphs

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | E / D | Conversion graphs |  |  |  |
| B | D / C | Distance-time and speed-time <br> graphs |  |  |  |
| C | D / C | Other real life graphs |  |  |  |

Topic 28: Measures and Speed Distance Time

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | D / C | Converting units |  |  |  |
| B | D / C | Speed |  |  |  |
| C | B | Density |  |  |  |

Topic 29: Shapes, solids and symmetry

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | E | Solids |  |  |  |
| B | D | Plans and elevations |  |  |  |
| C | F/E | Nets |  |  |  |
| D | F | Symmetry |  |  |  |

Topic 30: Proportionality

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | A | Direct proportion |  |  |  |
| B | A* $^{*}$ | Indirect proportion |  |  |  |

## Topic 41: Loci and Constructions

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | D / C | Constructing shapes |  |  |  |
| B | D / C | Four constructions |  |  |  |
| C | C | Loci |  |  |  |

Topic 32: Congruence and Similarity

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | E / D | Congruency |  |  |  |
| B | D / C | Similar shapes |  |  |  |
| C | A / A* | Similar solids |  |  |  |
| D | A / A* | Proving congruency |  |  |  |

## Topic 33: Circle Theorems

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | B $\rightarrow$ A $^{*}$ | Finding missing angles |  |  |  |
| B | A / A* | Explanation of missing angles |  |  |  |
| C | A / A* | Proof |  |  |  |

Topic 34: Trigonometry 2 and Bearings

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | C | Bearings |  |  |  |
| B | A | Sine rule |  |  |  |
| C | A | Cosine rule |  |  |  |
| D | A/A* | Problem solving |  |  |  |
| E | A | Solving trig equations using <br> trig graphs |  |  |  |

Topic 35: Transformations of Graphs

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | A* $^{*}$ | Transformations of graphs |  |  |  |
| B | A* | Transformations of trig graphs |  |  |  |
| C | A | Shapes of graphs |  |  |  |

## Topic 36: Vectors

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | A / A* | Finding vectors |  |  |  |

Topic 37: Functional Number

| H/w | Grade | Objectives | Completed <br> (Date) | Teacher <br> Assessment | Your Target |
| :---: | :---: | :---: | :---: | :---: | :---: |
| A | D / C | Currency conversions |  |  |  |
| B | D / C | Upper and lower bounds |  |  |  |
| C | B $\rightarrow$ A* | Limits of accuracy |  |  |  |
| D | D $\rightarrow$ B | Functional number questions |  |  |  |



