

# Revision Checklist!

## Algebra

### Manipulation

- Changing the subject and rearranging
- Expanding brackets
- Factorising
- Completing the square
- Simplifying algebraic fractions
- Adding and subtracting algebraic fractions
- Composite and inverse functions
- Algebraic proof

### Sequences

- Find and use linear nth term
- Finding the nth term of a quadratic sequence
- Geometric and exponential sequences
- Recursive sequences
- Special sequences

### Coordinate geometry

- Equation of a straight line from a graph
- Equation of a straight line graph from the gradient and a point
- Equations of a straight line graph from two points
- Equation of parallel and perpendicular lines
- Inequality regions
- Plotting and recognising graphs of all functions
- Approximating solutions from graphs
- Quadratic inequalities
- Turning points and roots
- Equation of a circle and a tangent to a circle

### HCF and LCM

- Highest common factor and lowest common multiple
- Product of prime factors

## Number

### Surds

- Simplifying surds
- Expanding double brackets with surds
- Rationalising the denominator
- Complex surds

### Fractions

- Fractions of amounts
- Adding and subtracting fractions and mixed numbers
- Multiplying and dividing fractions and mixed numbers
- Converting between recurring decimals and fractions

### Solving equations

- Form and solving all linear equations
- Linear simultaneous equations
- Linear and quadratic simultaneous equations
- Solving quadratics by factorising (single x squared)
- The Quadratic Formula
- Solving quadratics by completing the square
- Iteration

### Transformations

- Translations
- Reflections
- Rotations
- Enlargements
- Identify combined transformation
- Transformations of graphs

### Vectors

- Manipulating vectors
- Vectors
- Vector proof

### Percentages

- Percentages of amounts
- Percentage increase and decrease
- Calculating the percentage change
- Simple interest
- Compound interest and depreciation
- Reverse percentages

## Ratio and Proportion

### Standard form and indices

- Fractional and negative indices
- Converting standard form
- Calculating with standard form

### Limits of accuracy

- Estimation
- Error Intervals
- Upper and lower bounds

### Ratio

- Equivalent ratios and writing as 1 : n
- Dividing into a ratio
- Find quantities in a ratio when given one value
- Find quantities in a ratio when given the difference
- Adding ratios

### Constructions and loci

- Constructions
- Loci
- Plans, elevations and scale drawings

### Compound measures

- Area under a graph
- Speed distance time graphs
- Velocity time graphs
- Worded speed, distance and time
- Pressure, Force and Area
- Density, Mass and Volume
- Converting compound measures

## Geometry

### Trigonometry

- Pythagoras' Theorem
- SOHCAHTOA
- Exact trigonometric values
- Sine rule
- Cosine rule
- Area of a triangle
- Trigonometric graphs

### Angles

- Angles on parallel lines
- Angles in polygons
- Bearings
- Circle theorems

### Perimeter, area, volume and surface area

- Area of a trapezium
- Area and circumference of circles
- Arc length and area of a sector
- Volume and surface area of prisms
- Volume and surface area of a pyramid
- Volume and surface area of a cone
- Volume and surface area of a sphere
- Similar shapes including area and volume
- Congruent triangles

### Other stats

- Two way tables
- Drawing and reading pie charts
- Scatter graphs
- Sampling methods

### Averages, quartiles and the range

- Finding data from averages
- Advantages and disadvantages of averages
- Averages from grouped frequency tables
- Finding the upper and lower quartile and interquartile range

### Cumulative frequency and box plots.

- Constructing and comparing box plots
- Drawing and reading cumulative frequency curves

## Stats and Probability

### Proportion

- Recipes and Best buys
- Exchange rates
- Direct and Inverse Proportion
- Proportionality graphs

### Histograms

- Drawing and reading Histograms
- Estimating the median from a Histogram

### Probability

- Relative frequency
- Experimental and theoretical probability
- Probability tree diagrams
- Conditional probability
- Complete and interpret Venn diagrams
- Product rule for counting