

Parrs Wood MATHS Year 9 Revision List

Below is a list of topics that have been covered so far this year. Students should use mathswatch and their exercise books to revise these topics before the spring assessment. Topics highlighted in green are extension topics

Algebra

- Understand algebraic notation
- Simplify algebraic expressions
- Collect like terms
- Expand single brackets
- Simple Factorisation (one bracket) lol
- Expand and simplify Brackets
- Expand and simplify double brackets
- Factorise Quadratics

Further Graphs

- Plot co-ordinates
- Plot a linear graph
- Plot a quadratic graph
- Find the midpoint of a line
- Find the equation of a line $y = mx + c$
- Find the equation of a line when given the gradient and a co-ordinate
- Find the equation of a line when given two co-ordinates
- Plot Cubic and Reciprocal graphs

Pythagoras

- Find the area of squares
- Find the square root of numbers
- Recall Pythagoras' theorem
- Use Pythagoras' Theorem to find the hypotenuse
- Use Pythagoras' Theorem to find any side of a triangle
- Pythagoras id 3D

Trigonometry

- Label the sides of a triangle opposite, adjacent, hypotenuse
- Identify which trigonometric ratio to use
- Find the side of a right angled triangle
- Find the angle in a right angled triangle
- Use the sine rule to find missing lengths and angles
- Use the cosine rule to find missing lengths and angles
- Use a calculator to evaluate trig ratios

Direct and Inverse Proportion

- Identify a ratio
- Write equivalent Ratios
- Simplify a ratio
- Ratio recipe
- Basic proportion
- Best value
- Simple Proportion
- Share an amount in a ratio
- Direct proportion ratio tables
- Similar shapes
- Direct & inverse proportion
- Similarity-Area and volume

Circles, Cones and Spheres

- Find the area by counting squares
- Find the perimeter of shapes
- Find the area of a rectangle
- Find the area of a triangle
- Find the area of a trapezium
- Find the area of a parallelogram
- Label a circle
- Algebraic area / perimeter

- Label the parts of a circle
- Find the circumference of a circle
- Find the area of a circle
- Find the area of compound shapes
- Find the volume of a sphere
- Find the volume of a cone
- Find the volume of a pyramid
- Find the surface area of spheres and cones
- Circle Theorems

Fractions, Decimals and Percentages

- Say what fraction of a shape has been shaded etc
- Convert between basic fraction, decimal and percentage
- Use equivalent Fractions

- Simplify a fraction
- Add & Subtract Fractions
- Find a fraction of an amount
- Multiply and Divide Fractions
- **Reciprocals**
- Convert between Fractions, Decimals and percentages
- Order Fractions Decimals and percentages
- Convert between Recurring Decimals and percentages
- Understand the meaning of percent
- Find Basic percentages
1, 10, 25, 50
- Find a percentage of a quantity without a calculator
- Find a percentage of a quantity with a calculator
- Complete a percentage increase/Decrease without a calculator
- Complete a percentage increase/Decrease with a calculator
- Express one number as a percentage of another and calculate percentages
- Convert between Fractions decimals and percentages
- Calculate a percentage change from one quantity to another
- Calculate simple and compound interest
- Calculate reverse percentages