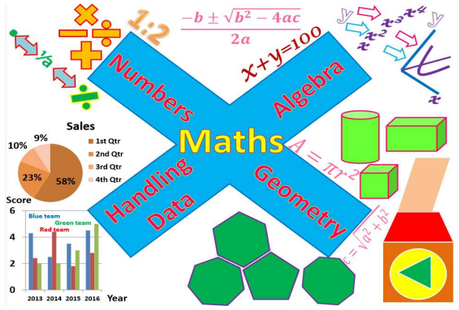
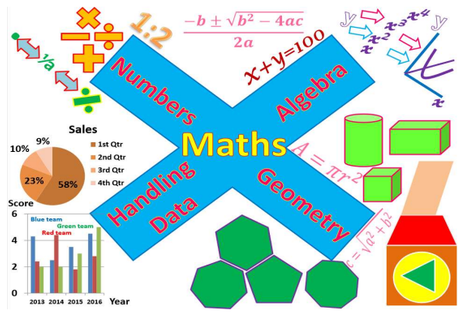



MATHS COUNTS

and it counts to say so




# Maths at REACH

## Year 10

| | Aiming for 1 | Aiming for 3 |
|---|---|---|
| Year 10 Autumn 1 | Factors, multiples and primes | HCF and LCM |
| | Squares, cubes and roots | Laws of indices (basic) |
| | Place value | Rounding |
| | Directed numbers | BIDMAS |
| | Coordinates | nth term |
| | Patterns and sequences | Sketching straight line graphs |
| | Next term | Substituting |
| | | |
| Year 10 Autumn 2 | Collecting like terms | Expanding and simplifying |
| | Function machines | Solving linear equations |
| | Solving linear equations | Deriving equations from words |
| | Use the symbols =, ≠, <, >, ≤, ≥. | Solve linear inequalities |
| | Types of 2D/3D shapes and properties | Angles on line/triangle/point |
| | Types of 2D/3D shapes and properties | Angles in parallel lines |
| | Types of lines and angles | Plans and elevations |
| | Measuring lines and angles | Constructing triangles |
| | | |
| Year 10 Spring 1 | Symmetry and rotational symmetry | Bearings |
| | Reflection | Reflection and rotation |
| | Rotation | Enlargement and translation |
| | Area and perimeter of rectangles | Area and perimeter of compound shapes and trapeziums |
| | Area and perimeter of triangles | Area and circumference of circles |
| | Volume and surface area of cuboids | Volume and surface area of prisms |
| | | |
| Year 10 Spring 2 | Read scales | Time calculations |
| | Averages | Averages problems |
| | Tally charts | Pie charts |
| | Bar graphs | Stem and leaf |
| | Pictograms | Scatter graphs |
| | | |
| Year 10 Summer 1 | Probability | Relative frequency |
| | Frequency trees and systematic listing | Sample space diagrams |
| | Simplify ratios | Divide into a ratio |
| | Ordering decimals | Recipes and best value |
| | Equivalent fractions | Calculating with fractions |
| | Ordering fractions | Percentages of amounts, increasing and decreasing |
| | | |
| Year 10 Summer 2 | FDP conversions | FDP conversions |

## Year 11

| | Aiming for 3 | Aiming for 5 | Aiming for 7 | Aiming for 9 |
|---|---|---|---|---|
| Year 11 Autumn 1 | HCF and LCM | Standard form | Surds | Surds |
| | Laws of indices (basic) | Laws of indices (fractional and negative) | Surds | Algebraic Proofs |
| | Rounding | Rounding | Bounds | Bounds |
| | BIDMAS | Bounds | Bounds calculations | Bounds calculations |
| | nth term | Solve simultaneous equations graphically | Parallel and perpendicular equations | Transformations of graphs |
| | Sketching straight line graphs | Sketching quadratic and cubic graphs | Transformations of graphs | Quadratic nth term |
| | Substituting | Expand quadratics | Simplify algebraic fractions | Area under graphs |
| | | | | |
| Year 11 Autumn 2 | Expanding and simplifying | Factorise quadratics | Factorise quadratics | Tangents to circles |
| | Solving linear equations | Rearrange formulae | Solve quadratics | Factorise and solve quadratics |
| | Deriving equations from words | Solve linear simultaneous equations | Solve algebraic fractions | Solve nonlinear simultaneous equations |
| | Solve linear inequalities | Represent inequalities graphically | Solve quadratic inequlaties | Solve quadratic inequlaties |
| | Angles on line/triangle/point | Angles in parallel lines | Circle theorems | Circle theorems |
| | Angles in parallel lines | Angles in polygons | Circle theorems | Geometrical proofs |
| | Plans and elevations | Geometrical proofs | Geometrical proofs | Vectors |
| | Constructing triangles | Angle and line bisectors | Vectors | Vectors |
| | | | | |
| Year 11 Spring 1 | Bearings | Loci | Loci | Loci |
| | Reflection and rotation | Transformations | Negative/fractional enlargements | Negative/fractional enlargements |
| | Enlargement and translation | Pythagoras' theorem | 3D Pythagoras and SOH CAH TOA | Sine and cosine rules |
| | Area and perimeter of compound shapes and trapeziums | SOH CAH TOA | Sine and cosine rules | Trig review |
| | Area and circumference of circles | Area and perimeter of sectors | Volume and surface area of cylinders | Volume and surface area of pyramids and spheres |
| | Volume and surface area of prisms | Volume and surface area of cylinders | Volume and surface area of pyramids and spheres | Volume of frustums |
| | | | | |
| Year 11 Spring 2 | Time calculations | Speed, distance and time | Length, area and volume similarity | Velocity-time graphs |
| | Averages problems | Pie charts | Averages from tables | Averages from tables |
| | Pie charts | Averages from tables | Cumulative frequency and box plots | Cumulative frequency and box plots |
| | Stem and leaf | Scatter graphs | Histograms | Histograms |
| | Scatter graphs | Sampling | Sampling | Petersen capture-recapture |
| | | | | |
| Year 11 Summer 1 | Relative frequency | Probability trees | Probability trees | Probability trees |
| | Sample space diagrams | Probability trees | Set theory (with Venn diagrams) | Set theory (with Venn diagrams) |
| | Divide into a ratio | Proportion | Proportion | Proportion |
| | Recipes and best value | Exchange rates | Converting recurring decimals to fractions | Converting recurring decimals to fractions |
| | Calculating with fractions | Calculating with mixed numbers | Converting recurring decimals to fractions | Converting recurring decimals to fractions |
| | Percentages of amounts, increasing and decreasing | Compound interest | Compound interest | Compound interest |
| | | | | |
| Year 11 Summer 2 | FDP conversions | Reverse percentages | Reverse percentages | Reverse percentages |