| Maths | | | Year: 9/10 Year 1 | | |
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| Autumn Term | | Spring Term | | Summer term | |
| Half Term 1 | Half Term 2 | Half Term 3 | Half Term 4 | Half Term 5 | Half Term 6 |
| Theme/ topic: Sequences, types of numbers, testing conjectures, using percentages | Theme/ topic: Using percentages, maths & money, indices & roots, non-calculator methods | Theme/ topic: Straight line graphs, forming and solving equations, gradients and lines | Theme/ topic: Angles in polygons, Pythagoras and trigonometry | Theme/ topic: Ratio and proportion, area and volume, | Theme/ topic: Transformations, representing, collecting and interpreting data |
| By the end of this half term pupils will learn about/how to | By the end of this half term pupils will learn about/how to | By the end of this half term pupils will learn about/how to | By the end of this half term pupils will learn about/how to | By the end of this half term pupils will learn about/how to | By the end of this half term pupils will learn about/how to |
| Understand the difference between factors and multiples. Understand the difference between rational and irrational numbers. Find the HCF & LCM of any number | Mixed percentage problems Simple and compound interest Repeated percentage change Rules of indices, power zero, negative powers Written and mental methods of arithmetic with | Use tables of values, compare gradients and intercepts, and interpret in real-life graphs Use y=mx+c and find the equation from a graph Solve two-step equations and inequalities involving brackets, | Interior and Exterior angles in Polygons. Use Pythagoras' Theorem to find missing sides in right-angled triangles Use Pythagoras' Theorem on a coordinate axes | Compare quantities using ratios, share in a ratio Link ratios with fractions, scales, algebra, and graphs Understand properties of circles Find the area of circles Find the volume of spheres | Reflect shapes in horizontal, vertical and diagonal lines Rotate shapes about a point Translate points and shape by a given vector Compare the rotation and reflection of shapes. |

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| Express numbers as the product of their primes<br>Find the nth term of a sequence<br>Expand a pair of brackets<br>Use the 4 rules on fractions, and solve problems involving fractions<br>Solve financial problems with percentages<br>Look for proofs and counterexamples. | integers, decimals and fractions<br>Rounding and accuracy<br>Financial maths<br>Multi – step problems | negative numbers and with unknowns on both sides of the equals sign<br>Rearrange formulae up to two-step and substitute into formulae and equations | Extend to using Pythagoras in 3 dimensions<br>Use the tangent, sine, and cosine ratios to find missing side lengths<br>Use the tangent, sine, and cosine ratios to | Recognise prisms<br>Draw nets of cuboids and other 3-d shapes<br>Draw plans and elevations<br>Find the area of 2-d shapes<br>Find the surface area of cuboids, triangular prisms, and cylinders<br>Find the volume of cubes, cuboids, prisms, and cylinders | Enlarge a shape from a point using positive, fractional, and negative scale factors.<br>Construct frequency tables, frequency polygons, line graphs, bar charts, pie charts, two-way tables<br>Find and interpret averages from a list and from a table<br>Time series graphs, Scatter graphs, lines of best fit, extrapolation<br>Compare data using statistical measures |
| They will understand | They will understand | They will understand | They will understand | They will understand | They will understand |
| Prime factor decomposition.<br>Arithmetic, geometric, and other sequences. | Fractions, decimals and percentages<br>Powers and Standard form | Difference between equality and inequality.<br>Representations of inequalities on number lines and on graphs | Pythagoras theorem<br>Trigonometric ratios | Properties of two dimensional and three dimensional shapes<br>Difference between perimeter, area and volume. | Which transformation has been applied to a shape<br>Why different methods of |

| | | | | | representing data are used |
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| Link to prior learning | Link to prior learning | Link to prior learning | Link to prior learning | Link to prior learning | Link to prior learning |
| Prime numbers, factors, multiples. | Types of numbers, using percentages | Co-ordinates, substitution, plotting graphs, solving equations, inequality signs | Angle facts, indices, properties of triangles, rearranging equations | Number, perimeter and area | Scale drawings and measures, angles, analysing and displaying data |