Year 10 Overview: Route 1

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Term** | **Week** | **Schedule of units** | | | |
| **Autumn Term 1** | **1** | Training | Place Value and ordering integers | Rounding – d.p & s.f | Four operations with decimals and negatives |
| **2** | Four operations with decimals and negatives, involving money, temperature, overdraft and inverse operations  1d – 1e  1d – 1e  1d – 1e | | | |
| **3** | BIDMAS | Indices and roots: find square and cube roots, recognise powers of 2,3,4 and 5 | | Positive powers of +/-integers and fractions |
| **4** | Positive powers of +/-integers and fractions | Factors & Multiples, HCF and LCM, Prime fact decomposition, Venn diagram | | |
| **5** | Factors & Multiples, HCF and LCM, Prime fact decomposition, Venn diagram | | | Understand algebraic terms and simplify by cancelling |
| **6** | Understand algebraic terms and simplify by cancelling | Simplify expressions: collecting like terms with integer, fractional and surd coefficients | | Index notation and index laws |
| **7** | Revision, Test, Review (optional)  2f  2f  Test | | | |
| **8** | Substitute +/- numbers into simple expressions | | Expand and simplify single brackets and 2 brackets | |
| Half term | | | | | |
| **Autumn Term 2** | **1** | Fcatorise into single bracket | | Reflective and lines of symmetry in 2D shapes | Order of rotation in 3D shapes |
| **2** | Recognise types on angles. Estimate, measure and draw amgles | | Concepts of congruency | Geometry rules for angles |
| **3** | Geometry rules for angles | Parallel lines: identify and use properties to find missing angles | | |
| **4** | Define and name polygons | Interior and exterior angles of regular polygons | | Pythagoras’ Theorem in 2D |
| **5** | Revision, Test, Review (Data 1) | | | |
| **6** | Pythag: length all sides | Pythag: proof right angle tringle, on coord grid & line segment | | Trig ratios |
| **7** | Trig ratios | Trig: 2D problems, angles of elevation | Exact values of sin θ ,cos θ and tan θ |  |
| Christmas Holidays | | | | | |
| **Spring Term 1** | **1** | Fractions: diagram, simplest and equivalent  5 | Convert mixed and improper fractions | Add/subtract mixed/improper fractions with same/different denominator | |
| **2** | Cont. +/- fractions | Mulitply/Divide fractions including by an integer | | Order fractions |
| **3** | Find fractions of an amount | | Express no. as % of another | % of quantity |
| **4** | FDP Conversion | Compare/order FDP | Simple & Compound interest | |
| **5** | Recognise terminating & recurring decimals | +/- mixed number fractions | Multiply mixed no. fractions | Division using mixed no. fractions |
| **6** | Revision, Test, Review (optional)  2f  2f  Test | | | |
| Half term | | | | | |
| **Spring Term 2** | **1** | Reciprocal of a number | Index laws, power zero | Standard form | Standard form: +/- |
| **2** | Standard form: x/÷ | Standard form: calculator | Expressions/ equations, formula, identity | Solve simple equations, function machines |
| **3** | Solve linear equations: unknown on both sides, brackets, negative signs | | | Rearrange simple equations |
| **4** | Revision, Test, Review (Data 2) | | | |
| **5** | Substitute into formula | Approx solutions | Angle/perimeter/word problems  3 | Inequalities: number line and numbers that satisfy |
| **6** | Inclusive/exclusive inequalities | Solve linear inequalities, solution on number line | inequality such as –3 < 2*x* + 1 <7 | Inequality notation, simple error intervals |
| Easter Holidays | | | | | |
| **Summer Term 1** | **1** | Sequences: recognises & function machine | Position-to-term or term-to-term rules | Arithmetic and drawing sequences  3 | Find the next/nth term for patterns and linear sequences |
| **2** | Nth term to find if a number is in sequence | Geometric progression to find term-to-term rule | Continue quadratic sequence and use nth term | Ratio: simplest form |
| **3** | Ratio: share quantity | Ratio: find one quantity, compare scale, conversions, mixing | | Ratio: fraction, 1:n, compare ratios  8 |
| **4** | Ratio: linear function/fraction, multiplicative relationship | Proportion: problems, unitary method and better buys | Scale up recipes | Currency conversions |
| **5** | Direct proportion | Inverse proportion | Scale, measure, estimates of measures | Convert units of measure, metric to metric |
| Half term | | | | | |
| **Summer Term 2** | **1** | Perimeter: rectangle & triangle  12 | Perimeter: parallelogram. Trapezia & compound shapes | Area: rectangle & triangle | Area: trapezium & parallelogram |
| **2** | Area & perimeter: compound shapes | Surface area: estimate & prism | S.A: rectangles & triangles | |
| **3** | Revision and Assessment (Data 3) | | | |
| **4** | Convert metric area measures  12 | Identify common solids | Volume of prisms including triangular prism, cube and cuboid | |
| **5** | Volumes from cubes/cuboids | Volumes of right prisms from cubes and cuboids | Convert metric volume measure include capacity |  |
| **6** | Upgrade Week | | | |
| **7** | Maths Matters (Banking) | | | |