|  |  |  |  |
| --- | --- | --- | --- |
|  | RED | AMBER | GREEN |
| **NUMBER** |  |  |  |
| Arithmetic | Negative number |  |  |  |
| Fractions  | Fraction of an amount |  |  |  |
| Fraction arithmetic |  |  |  |
| Recurring decimal to fraction  |  |  |  |
| Properties  | Laws of Indices  |  |  |  |
| Product of prime factors |  |  |  |
| Negative and fractional indices |  |  |  |
| Powers and roots  | Simplification of surds |  |  |  |
| Standard Form  | Conversion |  |  |  |
|  | Calculation  |  |  |  |
| Approximation and estimation  | Error interval |  |  |  |
| Bounds  |  |  |  |
| Other  | Product rule for counting |  |  |  |
| Calculator use |  |  |  |
| **Algebra**  |  |  |  |
| Manipulation  | Simplification |  |  |  |
| Expansion of Brackets |  |  |  |
| Factorisation |  |  |  |
| Substitute values  |  |  |  |
| Change subject of a formula  |  |  |  |
| Forming an expression  |  |  |  |
| Laws of indices  |  |  |  |
| Difference of two squares |  |  |  |
| Algebraic fractions |  |  |  |
| Equations and inequalities  | Linear equation |  |  |  |
| Linear inequality  |  |  |  |
| Linear simultaneous equations  |  |  |  |
| Form an equation  |  |  |  |
| Quadratic equation  |  |  |  |
| Quadratic inequality  |  |  |  |
| Equations of parallel lines |  |  |  |
| Equation of a tangent to a circle |  |  |  |
| Simultaneous equations linear/quadratic |  |  |  |
|  |  |  |  |  |
|  | RED | AMBER | GREEN |
| Graphs | Coordinates  |  |  |  |
| Gradient of a straight line graph  |  |  |  |
| Quadratic graph  |  |  |  |
|  | Gradients of parallel and perpendicular lines |  |  |  |
|  | Speed-time graph |  |  |  |
|  | Gradient of a curve |  |  |  |
|  | Transformations of functions |  |  |  |
|  | Graphs of trigonometric functions |  |  |  |
| Functions  | Number machines  |  |  |  |
| Sequences  | Inverse and composite functions  |  |  |  |
|  |  |  |  |  |
| **Ratio, proportion and rates of change**  |  |  |  |
| Conversion  | time, area  |  |  |  |
| Percentages  | Percentage of an amount  |  |  |  |
| Percentage decrease  |  |  |  |
| Depreciation |  |  |  |
| Reverse percentage |  |  |  |
| Ratio  | Write as a ratio |  |  |  |
| Share in a ratio |  |  |  |
| Use of ratio  |  |  |  |
| 1 : *n* form |  |  |  |
| Ratio to fraction  |  |  |  |
| Proportion | Direct proportion  |  |  |  |
| Currency conversion |  |  |  |
|  | Inverse proportion |  |  |  |
|  | Equations of proportion |  |  |  |
| Compound Measures | Average speed |  |  |  |
| Density |  |  |  |
| Pressure  |  |  |  |
| Growth and decay  | General iterative processes  |  |  |  |
| **Geometry and measures** |  |  |  |
| Shape  | Transformations |  |  |  |
| Angles  | Angles in a polygon |  |  |  |
|  |  | RED | AMBER | GREEN |
| Length, area and volume | Area of a rectangle |  |  |  |
| Area of a triangle |  |  |  |
| Area of a trapezium  |  |  |  |
| Area of a sector  |  |  |  |
| Surface area of a cuboid  |  |  |  |
| Volume of a cube  |  |  |  |
| Volume of composite solid |  |  |  |
| Similar triangles  |  |  |  |
| Pythagoras’s Theorem and Trigonometry | Pythagoras’s Theorem  |  |  |  |
| Trigonometry  |  |  |  |
| Sine and Cosine Rules  |  |  |  |
| Trigonometry in 3-D |  |  |  |
| Exact trigonometric values |  |  |  |
| Vectors  | Column vectors  |  |  |  |
| Vector geometry  |  |  |  |
| **Probability** |  |  |  |
| Probability  | Probability |  |  |  |
| Venn diagram |  |  |  |
| Probability from a Venn diagram |  |  |  |
| Independent combined events |  |  |  |
| Dependent combined events |  |  |  |
| **Statistics**  |  |  |  |
| Diagrams | Frequency polygon |  |  |  |
| Cumulative frequency graph  |  |  |  |
| Box plot  |  |  |  |
| Histogram  |  |  |  |
| Measures  | Mean |  |  |  |
|  | Lower and upper quartiles |  |  |  |
|  | Inter-quartile range |  |  |  |
| Population  | Comparison of distributions  |  |  |  |
|  | Capture-recapture method  |  |  |  |