|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | | 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 |  |  |  |