**Level 3**

|  |  |
| --- | --- |
| ***Learners*** organise their work, check results, and try different approaches. |  |
| ...talk about and explain their work. |  |
| ...use and interpret mathematical symbols and diagrams. |  |
| ...find particular examples that satisfy a general statement. |  |
| ...use place value in numbers up to 1 000 to make approximations. |  |
| ...use decimal notation in recording money, and recognise negative numbers in the context of temperature. |  |
| ...develop further mental strategies for adding and subtracting numbers with at least two digits. |  |
| ...use mental recall of the 2, 3, 4, 5 and 10 multiplication tables in solving whole-number problems involving multiplication and division, including those giving rise to remainders. |  |
| ...use standard units of length, capacity, mass and time. |  |
| ...classify shapes in various ways. |  |
| ...extract and interpret information presented in simple tables and lists, and construct and interpret bar charts and pictograms. |  |

**Level 4**

|  |  |
| --- | --- |
| ***Learners*** develop their own strategies for solving problems, and present information and results systematically.  |  |
| ...search for a solution by trying out ideas of their own.  |  |
| ...use their understanding of place value to multiply and divide whole numbers by 10 and 100.  |  |
| ...use a variety of mental and written methods for computation, including recall of multiplication facts up to 10 x 10.  |  |
| ...add and subtract decimals to two places.  |  |
| ...check their results are reasonable by considering the context or the size of the numbers.  |  |
| ...use simple fractions and percentages to describe approximate parts of a whole.  |  |
| ...recognise and describe number patterns and relationships and use simple formulae expressed in words.  |  |
| ...use their knowledge of shape to make 3D mathematical models, draw common 2D shapes in different orientations on grids, and reflect simple shapes in a mirror line.  |  |
| ...choose and use suitable units and instruments, reading, with appropriate accuracy, numbers on a range of measuring instruments.  |  |
| ...find perimeters of shapes, areas by counting squares, and volumes by counting cubes.  |  |
| ...use and interpret co-ordinates in the first quadrant.  |  |
| ...collect discrete data, group data where appropriate, and use the mode and median as characteristics of a set of data.  |  |
| ...draw and interpret frequency diagrams and construct and interpret simple line graphs.  |  |
| ...understand and use simple vocabulary associated with probability. |  |

**Level 5**

|  |  |
| --- | --- |
| ***Learners*** identify and obtain information to solve problems, and check whether their results are sensible in the context of the problem.  |  |
| ...describe situations mathematically using symbols, words and diagrams and draw their own conclusions, explaining their reasoning.  |  |
| ...make general statements of their own, based on available evidence.  |  |
| ...use their understanding of place value to multiply and divide whole numbers and decimals.  |  |
| ...order, add and subtract negative numbers.  |  |
| ...check their solutions by applying inverse operations or estimating using approximations.  |  |
| ...calculate fractional or percentage parts of quantities and measurements.  |  |
| ...construct and use simple formulae involving one or two operations.  |  |
| ...use co-ordinates in all four quadrants.  |  |
| ...measure and draw angles to the nearest degree.  |  |
| ...recognise, identify and describe all the symmetries of 2D shapes.  |  |
| ...convert one metric unit to another and know the rough metric equivalents of imperial units in daily use.  |  |
| ...make sensible estimates of a range of everyday measures.  |  |
| ...find areas of rectangles and triangles and volumes of cuboids.  |  |
| ...read scales on maps, plans and graphs.  |  |
| ...use the mean of discrete data and compare two simple distributions.  |  |
| ...interpret graphs, diagrams and pie charts.  |  |
| ...use the probability scale from 0 to 1, and appreciate that different outcomes may result from repeating an experiment. |  |

**Level 6**

|  |  |
| --- | --- |
| **Learners** solve complex problems by breaking them down into smaller tasks, and give some mathematical justifications to support their methods, arguments or conclusions. |  |
| ...interpret, discuss and synthesise information presented in a variety of mathematical forms. |  |
| ...use trial-and-improvement methods involving approximating and ordering decimals. |  |
| ...calculate one number as a fraction or percentage of another. |  |
| ...use the equivalences between fractions, decimals and percentages and calculate using ratios in appropriate situations. |  |
| ...find and describe in words the rule for the next term or nth term of a sequence where the rule is linear, and ...formulate and solve a variety of simple linear equations. |  |
| ...represent mappings expressed algebraically. |  |
| ...use common 2D representations of 3D objects, and the properties of quadrilaterals to classify different types of quadrilateral. |  |
| ...solve problems using angle and symmetry properties of polygons and properties of intersecting and parallel lines. |  |
| ...use formulae for finding circumferences and areas of circles, areas of plane rectilinear figures and volumes of cuboids, and enlarge shapes by a positive whole-number scale factor. |  |
| ...collect and record continuous data, and construct and interpret frequency diagrams, pie charts and scatter diagrams. |  |
| ...use their knowledge that the total probability of all the mutually exclusive outcomes of an experiment is 1, and find and justify probabilities. |  |
| …identify all the outcomes when dealing with a combination of two experiments. |  |