**Band 5**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Number and Place Value** | **B** | **JA** | **SA** | **E** |
| read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit |  |  |  |  |
| count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 |  |  |  |  |
| interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero |  |  |  |  |
| round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 |  |  |  |  |
| solve number problems and practical problems that involve ordering and comparing numbers to 1 000 000, counting forwards or backwards in steps, interpreting negative numbers and rounding |  |  |  |  |
| read Roman numerals to 1000 (M) and recognise years written in Roman numerals |  |  |  |  |
| **Addition and Subtraction** | **B** | **JA** | **SA** | **E** |
| add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) |  |  |  |  |
| add and subtract numbers mentally with increasingly large numbers |  |  |  |  |
| use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy |  |  |  |  |
| solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why |  |  |  |  |
| **Multiplication and Division** | **B** | **JA** | **SA** | **E** |
| identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers |  |  |  |  |
| know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers |  |  |  |  |
| establish whether a number up to 100 is prime and recall prime numbers up to 19 |  |  |  |  |
| multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers |  |  |  |  |
| multiply and divide numbers mentally drawing upon known facts |  |  |  |  |
| divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context |  |  |  |  |
| multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 |  |  |  |  |
| recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) |  |  |  |  |
| solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes |  |  |  |  |
| solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign |  |  |  |  |
| solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates |  |  |  |  |
| **Fractions** | **B** | **JA** | **SA** | **E** |
| compare and order fractions whose denominators are all multiples of the same number |  |  |  |  |
| identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths |  |  |  |  |
| recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number e.g. 2/5 + 4/5 = 5/6 = 1 1/5 |  |  |  |  |
| add and subtract fractions with the same denominator and denominators that are multiples of the same number |  |  |  |  |
| multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams |  |  |  |  |
| read and write decimal numbers as fractions e.g. 0.71 = 71/100 |  |  |  |  |
| recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents |  |  |  |  |
| round decimals with two decimal places to the nearest whole number and to one decimal place |  |  |  |  |
| read, write, order and compare numbers with up to three decimal places |  |  |  |  |
| solve problems involving number up to three decimal places |  |  |  |  |
| recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal |  |  |  |  |
| solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25 |  |  |  |  |
| **Measurement**  | **B** | **JA** | **SA** | **E** |
| convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) |  |  |  |  |
| understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints |  |  |  |  |
| measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres |  |  |  |  |
| calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes |  |  |  |  |
| estimate volume e.g. using 1 cm³ blocks to build cuboids (including cubes) and capacity e.g. using water |  |  |  |  |
| solve problems involving converting between units of time |  |  |  |  |
| use all four operations to solve problems involving measure e.g. length, mass, volume, money using decimal notation, including scaling |  |  |  |  |
| **Properties of Shape** | **B** | **JA** | **SA** | **E** |
| identify 3-D shapes, including cubes and other cuboids, from 2-D representations |  |  |  |  |
| know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles |  |  |  |  |
| draw given angles, and measure them in degrees (°) |  |  |  |  |
| identify angles at a point and one whole turn (total 360°) |  |  |  |  |
| identify angles at a point on a straight line and 1/2 a turn (total 180°) |  |  |  |  |
| identify other multiples of 90° |  |  |  |  |
| use the properties of rectangles to deduce related facts and find missing lengths and angles |  |  |  |  |
| distinguish between regular and irregular polygons based on reasoning about equal sides and angles |  |  |  |  |
| **Position and Direction** | **B** | **JA** | **SA** | **E** |
| identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed. |  |  |  |  |
| **Statistics** | **B** | **JA** | **SA** | **E** |
| solve comparison, sum and difference problems using information presented in a line graph |  |  |  |  |
| complete, read and interpret information in tables, including timetables |  |  |  |  |