**Band 6**

| **Number and Place Value** | **B** | **JA** | **SA** | **A** |
| --- | --- | --- | --- | --- |
| read, write, order and compare numbers up to 10 000 000 and determine the value of each digit (including using number lines) |  |  |  |  |
| round any whole number to a required degree of accuracy |  |  |  |  |
| use negative numbers in context, and calculate intervals across zero |  |  |  |  |
| solve number and practical problems that involve ordering and comparing numbers to 10,000,000, rounding, using negative numbers and calculating intervals across zero |  |  |  |  |
| **Addition and Subtraction** | **B** | **JA** | **SA** | **A** |
| Perform mental calculations with mixed operations to carry out calculations involving the four operations. |  |  |  |  |
| Add and subtract integers |  |  |  |  |
| solve multi-step problems in contexts, deciding which operations and methods to use and why. |  |  |  |  |
| use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. |  |  |  |  |
| **Multiplication and Division** | **B** | **JA** | **SA** | **A** |
| multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication |  |  |  |  |
| divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context |  |  |  |  |
| divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context |  |  |  |  |
| Square and cube numbers |  |  |  |  |
| perform mental calculations, including with mixed operations and large numbers |  |  |  |  |
| identify common factors, common multiples and prime numbers |  |  |  |  |
| use his/her knowledge of the order of operations to carry out calculations involving the four operations |  |  |  |  |
| solve problems involving addition, subtraction, multiplication and division |  |  |  |  |
| use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy |  |  |  |  |
| **Fractions** | **B** | **JA** | **SA** | **A** |
| use common factors to simplify fractions; use common multiples to express fractions in the same denomination |  |  |  |  |
| compare and order fractions, including fractions > 1 |  |  |  |  |
| add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions |  |  |  |  |
| fractions of an amount - including find the whole |  |  |  |  |
| multiply simple pairs of proper fractions, writing the answer in its simplest form e.g. 1/4 × 1/2 = 1/8 |  |  |  |  |
| multiply and divide proper fractions by whole numbers e.g. 1/3 ÷ 2 = 1/6 |  |  |  |  |
| associate a fraction with division and calculate decimal fraction equivalents e.g. 0.375 for a simple fraction e.g. 3/8 |  |  |  |  |
| equivalent fractions on a numberline |  |  |  |  |
| identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places |  |  |  |  |
| multiply one-digit numbers with up to two decimal places by whole numbers |  |  |  |  |
| use written division methods in cases where the answer has up to two decimal places |  |  |  |  |
| solve problems which require answers to be rounded to specified degrees of accuracy |  |  |  |  |
| recall and use equivalences between simple fractions, decimals and percentages, including in different contexts |  |  |  |  |
| **Measurement** | **B** | **JA** | **SA** | **A** |
| solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate |  |  |  |  |
| use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places |  |  |  |  |
| convert between miles and kilometers |  |  |  |  |
| recognise that shapes with the same areas can have different perimeters and vice versa |  |  |  |  |
| recognise when it is possible to use formulae for area and volume of shapes |  |  |  |  |
| calculate the area of parallelograms and triangles |  |  |  |  |
| calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm³) and cubic metres (m³), and extending to other units e.g. mm³ and km³ |  |  |  |  |
| **Properties of Shape** | **B** | **JA** | **SA** | **A** |
| draw 2-D shapes using given dimensions and angles |  |  |  |  |
| recognise, describe and build simple 3-D shapes, including making nets |  |  |  |  |
| compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons |  |  |  |  |
| illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius |  |  |  |  |
| recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles |  |  |  |  |
| **Position and Direction** | **B** | **JA** | **SA** | **A** |
| describe positions on the full coordinate grid (all four quadrants) |  |  |  |  |
| draw and translate simple shapes on the coordinate plane, and reflect them in the axis |  |  |  |  |
| **Statistics** | **B** | **JA** | **SA** | **A** |
| interpret and construct pie charts and line graphs and use these to solve problems |  |  |  |  |
| calculate and interpret the mean as an average |  |  |  |  |
| **Proportion and Ratio** | **B** | **JA** | **SA** | **A** |
| use ratio language and the ratio symbol |  |  |  |  |
| solve problems including ratio and fractions |  |  |  |  |
| solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts |  |  |  |  |
| solve problems involving the calculation of percentages e.g. of measures, and such as 15% of 360 and the use of percentages for comparison |  |  |  |  |
| solve problems involving similar shapes where the scale factor is known or can be found |  |  |  |  |
| solve problems involving unequal sharing and grouping using knowledge of fractions and multiples |  |  |  |  |
| Scale drawing and using scale factors |  |  |  |  |
| **Algebra** | **B** | **JA** | **SA** | **A** |
| use simple formulae  form equations |  |  |  |  |
| generate and describe linear number sequences |  |  |  |  |
| express missing number problems algebraically |  |  |  |  |
| find pairs of numbers that satisfy an equation with two unknowns |  |  |  |  |
| enumerate possibilities of combinations of two variables |  |  |  |  |