|  | read, write, order and compare numbers to 100000 and determine the value of each digit | read, write, order and compare numbers to at least 1 000000 and determine the value of each digit | count forwards or backwards in steps of powers of 10 for any given number up to 1000000 | read, write, order and compare numbers with up to three decimal places | count forwards and backwards in simple fractions | round any number up to 100000 to the nearest 10, 100,1000 and 10000 | $\begin{gathered} \text { round any } \\ \text { number up } \\ \text { to } 1000000 \\ \text { to the } \\ \text { nearest } 10, \\ 100,1000, \\ 10000 \text { and } \\ 100000 \end{gathered}$ | round decimals with two decimal places to the nearest whole number and to one decimal place | multiply and divide whole numbers by 10 , 100 and 1000 | multiply and divide decimal numbers by 10, 100 and 1000 | convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) | solve number problems and practical problems that involve all of the above | interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through 0 | read Roman numerals to 1000 (M) and recognise years written in Roman numerals |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\bigcirc$ | add and subtract numbers mentally with increasingly large numbers using Year 5 mental calculation strategies | mentally add and subtract tenths, and one-digit whole numbers and tenths. | add and subtract two 4 digit numbers with more than one exchange | add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtractio n) | add and subtract decimals, including a mix of whole numbers and decimals, decimals with different numbers of decimal places, and complement s of 1 (for example, $0.83+0.17=$ 1 ). | use the inverse to check calculations | solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. | use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy |  |  |  |  |  |  |


|  | multiply and divide whole numbers by 10, 100 and 1000 (PV) | multiply and divide whole numbers and decimals by 10, 100 and 1000 (PV) | recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) | multiply and divide numbers mentally drawing upon known facts eg: I know 300x4 because I know 3x4 | 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 (nonprime) numbers | establish whether a number up to 100 is prime and recall prime numbers up to 19 | solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes | multiply numbers up to 4 digits by a onedigit number using a formal written method | multiply numbers up to 4 digits by a two-digit number using a formal written method, including long multiplicatio n for two- digit numbers | divide numbers up to 4 digits by a one-digit number using the formal written method (as fractions for example) of short division and interpret remainders appropriately for the context | solve problems involving multiplicatio $n$ and division, including scaling by simple fractions and problems involving simple rates | solve problems involving addition, subtraction <br> multiplicati on and division and a combinatio n of these, including understand ing the meaning of the equals sign |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \infty \\ & 0 \\ & \text { O} \\ & \frac{0}{0} \\ & \text { \#it } \end{aligned}$ | read, write, order and compare numbers with up to three decimal places (PV) | compare and order fractions whose denominato rs are all multiples of the same number | be able to find fractions of numbers and quantities | add and subtract fractions with the same denominat or and denominat ors that are multiples of the same number | multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams | recognise mixed numbers and improper fractions and convert from one form to the other and write mathematic al statements $>1$ as a mixed number | identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths | read and write decimal numbers as fractions [for example, 0.71 = 71/100] | recognise and use thousand ths and relate them to tenths, hundredt hs and decimal equivalen ts | recognise the per cent symbol (\%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with <br> denominator 100, and as a decimal | know fraction, decimal and percentage equivalents | $\square$ 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. |  |
| $\begin{aligned} & \text { © } \\ & \frac{0}{\circ} \\ & \frac{0}{\mathrm{O}} \end{aligned}$ | N/A |  |  |  |  |  |  |  |  |  |  |  |  |


|  | convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) In PV | 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 [for example, using 1 cm3 <br> blocks to build cuboids (including cubes)] and capacity [for example, using water] | **tell the time using digital, analogue and 24 hour clock (**Ongoing throughout the year) | solve problems involving converting between units of time | use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. | understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ratio and Proportior | N/A |  |  |  |  |  |  |  |
| $\begin{aligned} & \text { Z } \\ & \text { O } \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ | identify 3-D shapes, including cubes and other cuboids, from 2-D representation s | know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles | identify: angles at a point and one whole turn (total 3600) angles at a point on a straight line and $1 / 2$ a turn (total 1800) other multiples of 900 | draw given angles, and measure them in degrees (o) | 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 | 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 | recognise and use reflection and translation in a variety of diagrams, including continuing to use a 2-D grid and coordinates in the first quadrant. Reflection should be in lines that are parallel to the axes |

$\left.\begin{array}{|c|c|c|c|}\hline & & \begin{array}{c}\text { solve } \\ \text { comparison, } \\ \text { sum and } \\ \text { difference }\end{array} & \begin{array}{c}\text { complete, } \\ \text { read and } \\ \text { interpret }\end{array} \\ \text { read and } \\ \text { problems } \\ \text { informatio } \\ \text { graphs line }\end{array} \quad \begin{array}{c}\text { draw line } \\ \text { graphs } \\ \text { using } \\ \text { information in tables, } \\ \text { inesented in a } \\ \text { line } \\ \text { limetables } \\ \text { graph }\end{array}\right]$

