



Arno Vale Junior School: Year 4 mathematicians



Number, place value, approximation and estimation/rounding

- Count in multiples of 6, 7, 9, 25 and 1,000.
- Order and compare numbers beyond 1,000.
- Find 1,000 more or less than a given number.
- Recognise the place value of each digit in a 4-digit number.
- Read Roman numerals to 100 and know that over time the numeral system changed to include the concept of zero and place value.
- Identify, represent and estimate numbers using different representations.
- Round any number to the nearest 10, 100 or 1,000.
- Count backwards through zero to include negative numbers.
- Solve number and practical problems with the above (involving increasingly large numbers).

Calculations

- Add and subtract numbers with up to 4-digits using the formal written methods of columnar addition and subtraction.
- Estimate and use inverse operations to check answers in a calculation.
- Solve addition and subtraction 2-step problems in contexts, deciding which operations and methods to use and why.
- Recall multiplication and division facts up to 12×12 .
- Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers.
- Recognise and use factor pairs and commutativity in mental calculations.
- Multiply 2-digit numbers by a 1-digit number using formal written layout.
- Solve problems involving multiplying and adding, including using the distributive law to Multiply 2-digit numbers by 1-digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.

Fractions, decimals and percentages

- Count up and down in hundredths.
- Recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten.
- Recognise and show using diagrams, families of common equivalent fractions.
- Add and subtract fractions within the same denominator.
- Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$.
- Recognise and write decimal equivalents of any number of tenths or hundredths.
- Round decimals with one decimal place to the nearest whole number.
- Compare numbers with the same number of decimal places up to 2 decimal places.

- Find the effect of dividing a 1-digit or 2-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths.
- Solve problems involving increasingly harder fractions and fractions to divide quantities, including non-unit fractions where the answer is a whole number.
- Solve simple measure and money problems involving fractions and decimals to 2 decimal places.

Measurement

- Compare different measures, including money in £ and p.
- Estimate different measures, including money in £ and p.
- Calculate different measures. Including money in £ and p.
- Read, write and convert time between analogue and digital 12 hour clocks.
- Read, write and convert time between analogue and digital 24 hour clocks.
- Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.
- Convert between different units of measurements
- Measure and calculate the perimeter of a rectilinear figure in cm and m.
- Find the area of rectilinear shapes by counting squares.
- Calculate different measures

Geometry – properties of shapes

- Compare and classify geometric shapes, including quadrilaterals and triangles based on their properties and sizes.
- Identify lines of symmetry in 2D shapes presented in different orientations.
- Complete a simple symmetric figure with respect to a specific line of symmetry,
- Identify acute and obtuse angles and compare and order angles up to two right angles by size.

Geometry – position and direction

- Describe movements between positions as translations of a given unit to the left/right and up/down.
- Describe positions on a 2D grid as coordinates in the first quadrant.
- Plot specified points and draw sides to complete a given polygon.

Statistics

- Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.
- Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.

