

Reasoning Papers – Analysis of the last 3 years

1. Most Common Multi-Step Word Problems

The reasoning papers have increasingly relied on "stealth" multi-step problems, where a single mark often requires two or more distinct calculations.

- **Price Comparison & Combined Costs:** Problems involving two different items (e.g., "4 pens and a ruler cost £X") where pupils must find the value of one unknown.
- **Measurement Conversion in Context:** Multi-step problems that require converting units (e.g., cm to m) before performing a calculation, such as finding a perimeter or volume.
- **Large-Scale Multiplication & Division:** The standard 2 or 3-mark multi-step problem often involves calculating total quantities (e.g., "35 boxes of crisps") and then dividing or subtracting from a total.
- **Fraction & Percentage of Amounts:** Calculating a fraction of one value and comparing it to a percentage of another.

2. Common Ways Questions are Asked

Question formats remain predictable but are becoming "wordier" to test reading comprehension alongside mathematical fluency.

- **"Show Your Method":** Explicit boxes for 2 or 3-mark questions where partial marks are awarded for correct working even if the final answer is wrong.
- **Constraint-Based Questions:** "Circle the number that...", "Match the fraction...", or "Complete the table".
- **Explain Your Reasoning:** Questions requiring a written explanation (e.g., "Is John correct? Explain how you know.>").
- **Visual Interpretation:** Using a ruler to measure sides for a perimeter calculation or reflecting/translating shapes on a grid.

3. Strategy to Achieve 15–17 Marks (Out of 35)

To secure roughly 50% of the marks on a reasoning paper, pupils should focus on "high-yield" areas and exam technique:

- **Master the First 10–12 Questions:** These are typically 1-mark questions covering lower KS2 content (Years 3–4). Accuracy here is vital for a "safe" baseline.
- **The "Calculations & FDP" Rule:** Over 59% of marks consistently come from Addition, Subtraction, Multiplication, Division, and Fractions, Decimals, and Percentages (FDP). Prioritising these ensures the best "mark-per-minute" return.
- **Secure the Method Mark:** In 2-mark questions, teach children to always "show working." Even if they make a mental slip, a correct method (e.g., long multiplication) can still earn 1 mark.
- **Active Reading:** Use strategies like underlining keywords and using "easier numbers" to understand the operation required.

4. Essential Shape (Geometry) Objectives

While geometry accounts for a smaller percentage of marks (approx. 4–10%), these marks are often "quick wins" if the vocabulary is secure.

- **Properties of 2D & 3D Shapes:** Identifying parallel/perpendicular lines and classifying triangles or quadrilaterals.
- **Angle Rules:** Calculating missing angles on a straight line, around a point, or within a triangle.
- **Position & Direction:** Plotting coordinates in all four quadrants and performing reflections or translations.
- **Circles:** Understanding the relationship between radius and diameter.

5. Predictions for the 2026 Paper

Based on recent trends and "missing" content domains, the 2026 paper may feature:

- **Return of "Forgotten" Domains:** Topics like Roman Numerals, Volume, or Scale Factors, which have been less frequent post-Covid, are likely to reappear as the curriculum coverage re-balances.

- **Increased Year 6 Weighting:** While 2025 saw a slight dip in Year 6 content (38%), the 2026 paper may revert to the higher 44–47% range seen in previous years.
- **Decimal Fluency Traps:** Expect more questions testing careful reading of decimals (e.g., 35.5cm vs 3.55m) to catch out procedural learners.
- **Complex Multi-Step FDP:** Likely a 3-mark question involving percentages and large numbers, similar to the "boxes of crisps" style problems.