

Working through expressions with a green pencil

This tool shows a simple, structured way to work through mathematical expressions step by step. It does not change the maths, the level, or the expectations. It changes how the page is used, so thinking can stay visible and organised.

This is not a personalised solution.

It is a structural strategy that can support accuracy and reduce cognitive overload.

$$\begin{aligned} & 20 : \{2 + 4 \times [(5 \times 2 + 8) : (4 \times 3 - 3 \times 2)] - 4\} = \\ & = 20 : \{2 + 4 \times [(10 + 8) : (12 - 6)] - 4\} = \\ & = 20 : \{2 + 4 \times [18 : 6] - 4\} = \\ & = 20 : \{2 + 4 \times 3 - 4\} = \\ & = 20 : \{2 + 12 - 4\} = \\ & 20 : 10 = 2 \end{aligned}$$

Step 1 - Write the expression

Write the full expression on the page. Do not calculate yet.

Step 2 - Identify what comes first

Look at the expression and identify which operations come first. Mark them with the green pencil. No calculation at this stage.

Step 3 - Solve what's in green

Copy the expression onto the next line, resolving only the parts marked in green.

Step 4 - Repeat

Repeat the process on each new line: analyse, mark in green, copy and solve what's in green. Continue until you reach the final result.