

## Problem Solving and Reasoning

### Lesson 5

Use your knowledge of the methods you have looked at this week (all of which have involved partitioning) to find the missing numbers in these calculations. Think about how you will solve these problems and remember to write some sentences to explain your reasoning. Trial and error is a valid method if you are unsure where to start.

Example reasoning sentence:

I think that the first box could be \_\_\_ because I know that \_\_\_  $\times$  \_\_\_ = \_\_\_. If I then multiply the answer to that calculation by 10, I get the answer 240.

### Challenge

What numbers are missing from the grey spaces in these calculations?

$\times$		
4	240	28

$$\begin{array}{r} 240 \\ + 28 \\ \hline \end{array}$$

$\times$	50	
8		48

$$\begin{array}{r} \phantom{00} \\ + 48 \\ \hline 448 \end{array}$$

Explain how you worked out the missing numbers.

Now have a go at creating your own missing number problems. You could set them out in the grid method like the ones above or you could set them out in one of the other methods you have been using. Remember that you will need to work out the answers first (perhaps on a whiteboard or on a piece of paper) so that you know what numbers to remove when you write it out for someone else to solve.

Here is an example:

My working out  $\rightarrow$

$$\begin{array}{r} 27 \\ \times 4 \\ \hline 28 \\ 80 \\ \hline 108 \end{array}$$

What I give someone else to solve  $\rightarrow$

$$\begin{array}{r} \phantom{00}7 \\ \times \phantom{00} \\ \hline 28 \\ \hline 108 \end{array}$$