# Master Non-Standard Partitioning (4 digits) B

## Rationale

In this step, pupils build on their understanding that 4-digit numbers can be combined and partitioned in different ways. They will understand that 4-digit numbers can be composed and decomposed by breaking one or more place value parts. For example, 7,000, 1,300, 54 and 5 combine to make 8,359 or 3,072 partitions into 1,000, 2,040 and 32. They progress to using part-whole models to write and complete addition and subtraction equations. This includes equations with missing numbers. For example, 4,108 + ___ = 4,278 and 6,819 - ___ = 5,609. Pupils' understanding will be developed further by composing and decomposing numbers abstractly.

## Key Stem Sentences

- ___, ___, ___ and ___ combine to make ___
- ___ partitions into ___, ___ , ___ and ___
- ___ + ___ + ___ + ___ = ___
- ___ - ___ = ___

## Key Vocabulary

- 1,000s / 100s / 10s / 1s
- compose / decompose
- combine / partition

## Key Representations

### Place Value Counters



4,000, 1,100, 30 and 7 combine to make 5,137

5,137 partitions into 4,000, 1,100, 30 and 7

### Part-Whole Models

Decomposing



6,938 - ___ = 6,528

Composing



3,000 + 1,200 + 92 = ___

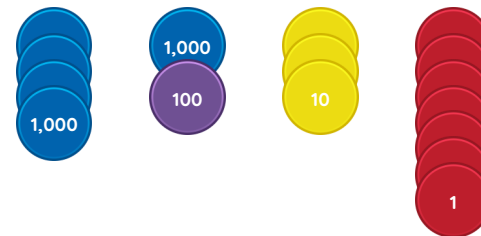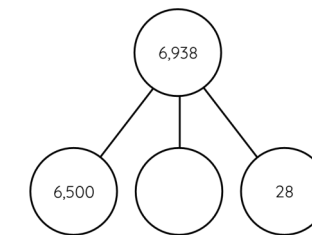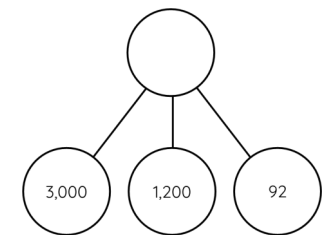## Common Errors or Misconceptions

- Pupils may compose or decompose incorrectly. For example 9,456 = 9,000 + 440 + 26

## Pupils will FLOURISH if they can...

- accurately combine and partition 4-digit numbers in different ways.
- complete addition and subtraction equations to show the composition and decomposition of 4-digit numbers.
- identify the missing number in addition and subtraction equations.
- explain their understanding using 'Decide, Assess, Back up' with representations.