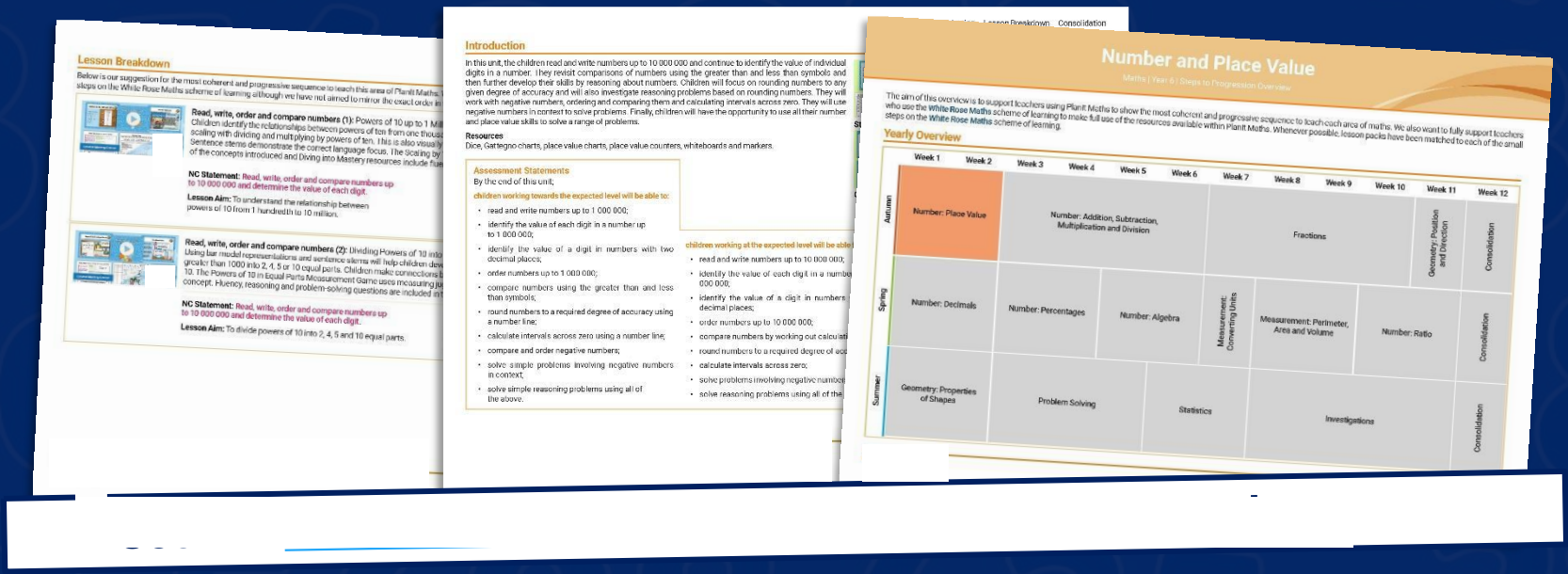
Subject

Number and Place Value

Need a coherently planned sequence of lessons to complement this resource?



Non-Standard Partitioning

Aim

- To compose and partition numbers up to 10 million using non-standard partitioning.

Success Criteria

- I can partition numbers up to 10 million in non-standard ways and write the related addition calculation.
- I can combine non-standard units to compose numbers up to 10 million and write the related addition calculation.
- I can solve problems relating to non-standard partitioning.

Remember It

Compose the number.

7 000 000	8000	50	0.7	200 000

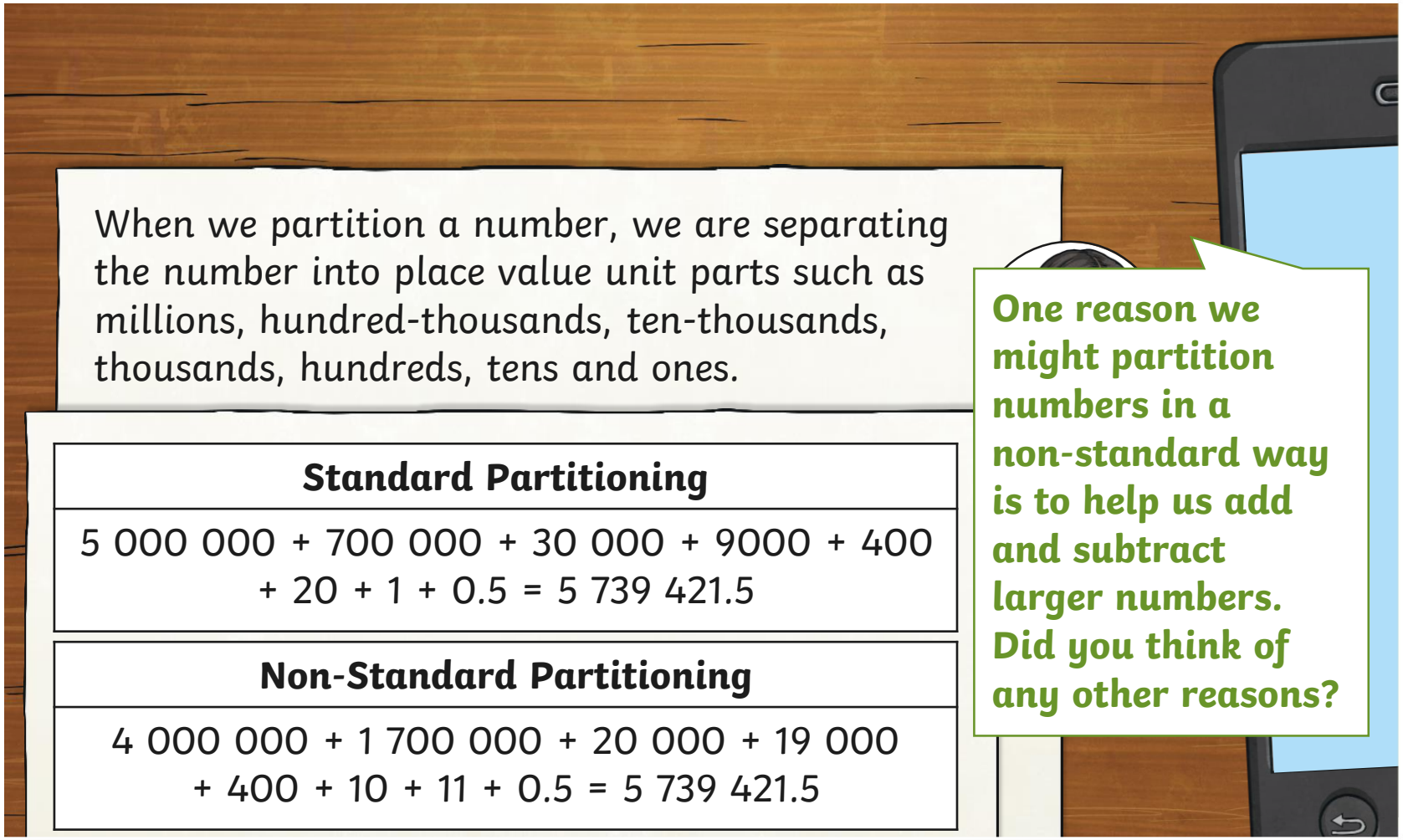
7 208 050.7

Partition the number.

4 065 800.03

4 000 000	**60 000**	**5000**	**800**	**0.03**

Non-Standard Partitioning



When we partition a number, we are separating the number into place value unit parts such as millions, hundred-thousands, ten-thousands, thousands, hundreds, tens and ones.

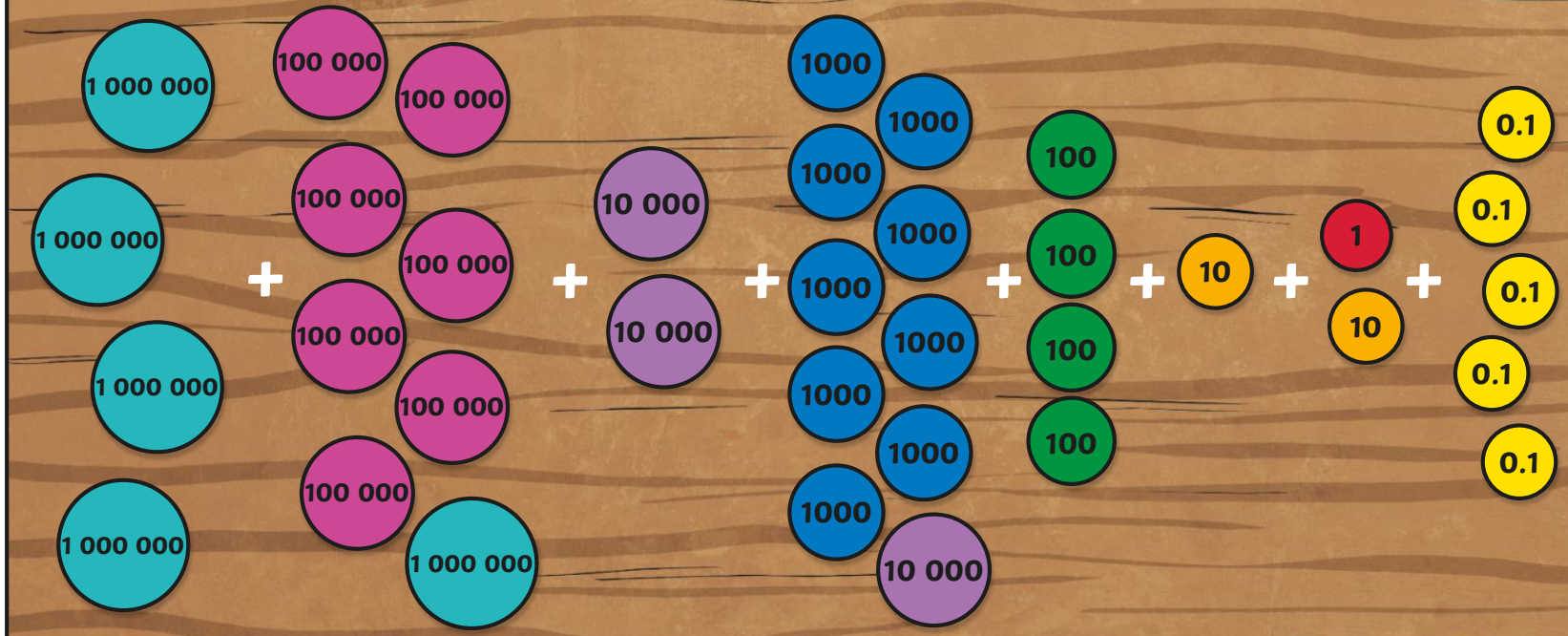
Standard Partitioning
5 000 000 + 700 000 + 30 000 + 9000 + 400 + 20 + 1 + 0.5 = 5 739 421.5

Non-Standard Partitioning
4 000 000 + 1 700 000 + 20 000 + 19 000 + 400 + 10 + 11 + 0.5 = 5 739 421.5

One reason we might partition numbers in a non-standard way is to help us add and subtract larger numbers. Did you think of any other reasons?

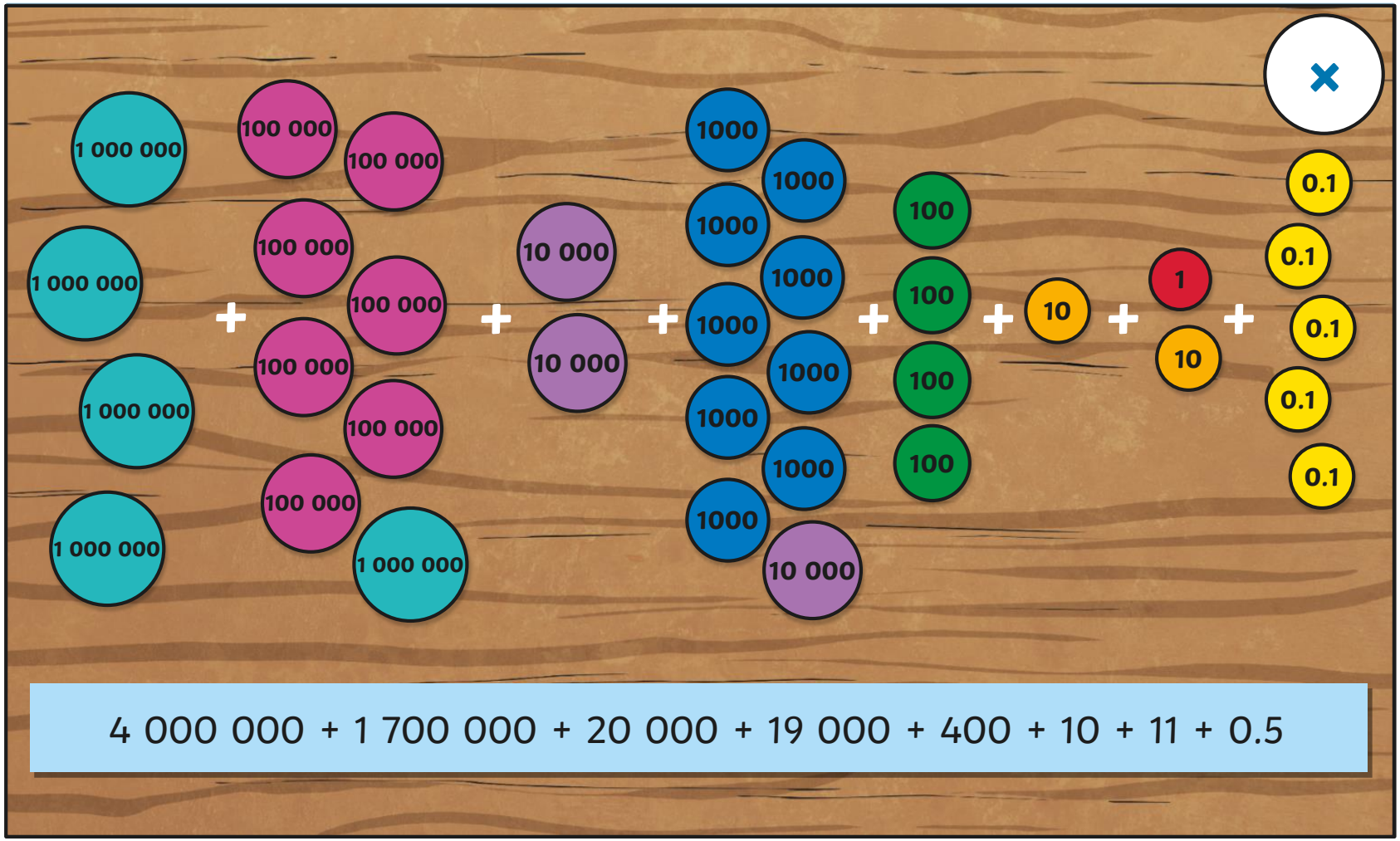
Non-Standard Partitioning

Compare it with a **non-standard** way of partitioning the same number.



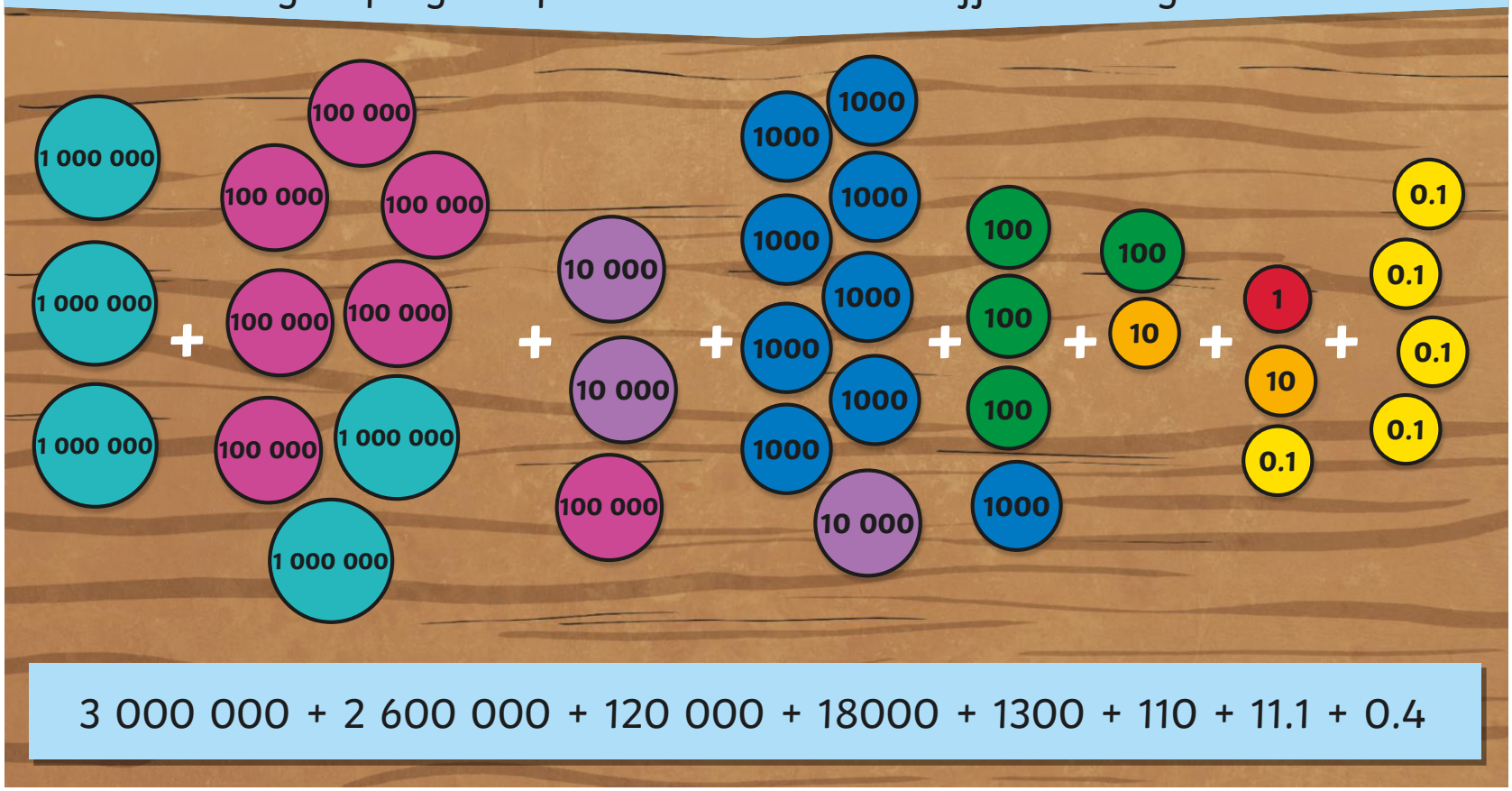
4 000 000 + 1 700 000 + 20 000 + 19 000 + 400 + 10 + 11 + 0.5

Non-Standard Partitioning



Non-Standard Partitioning

The value of the partitioned number always stays the same, we are just grouping the place value units in different ways.



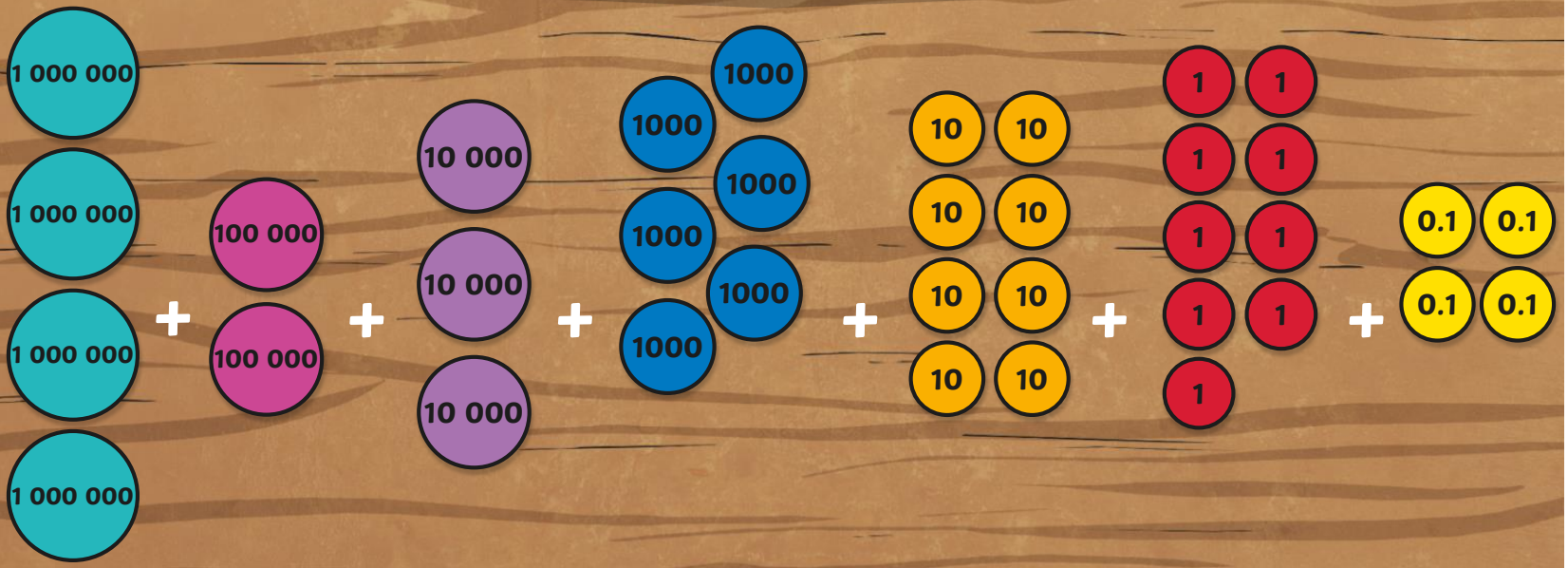
3 000 000 + 2 600 000 + 120 000 + 18000 + 1300 + 110 + 11.1 + 0.4

Non-Standard Partitioning

Find three different ways to partition 4 236 089.04 using non-standard partitioning.

Here is one possible way.

What other ways did you find?



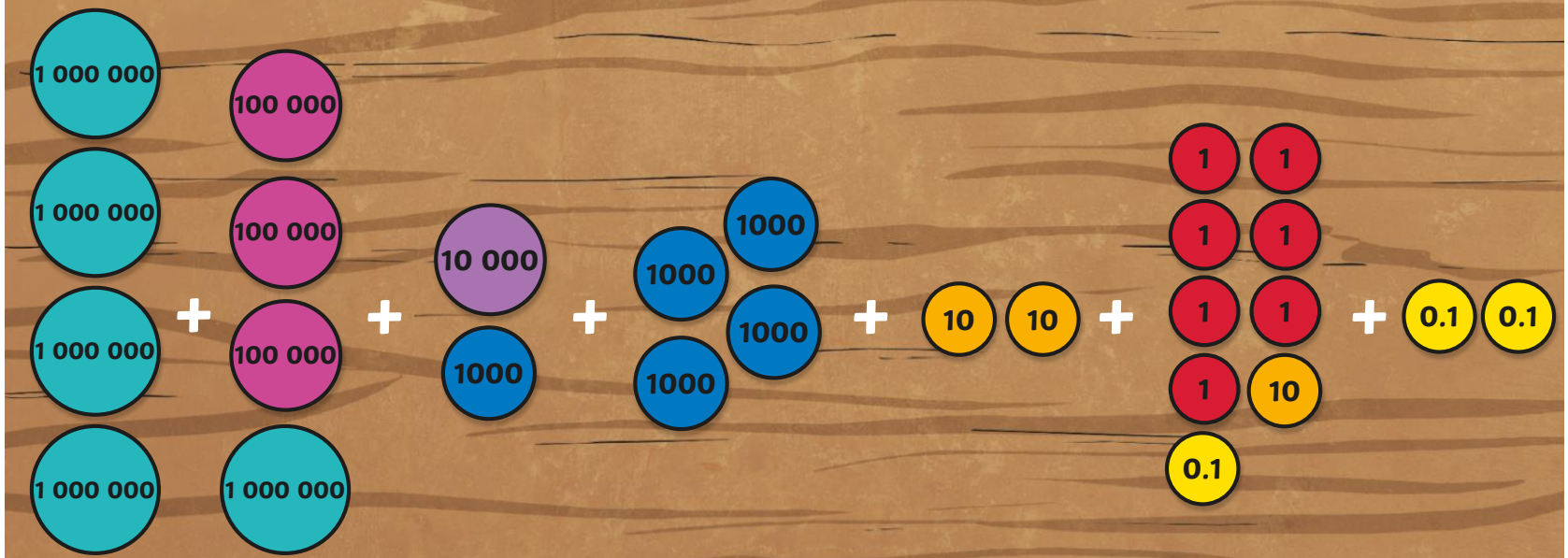
3 000 000 + 1 200 000 + 230 000 + 160 000 + 870 + 9 + 0.04

Non-Standard Composing

Whole Class

What number is shown here using non-standard unit parts?

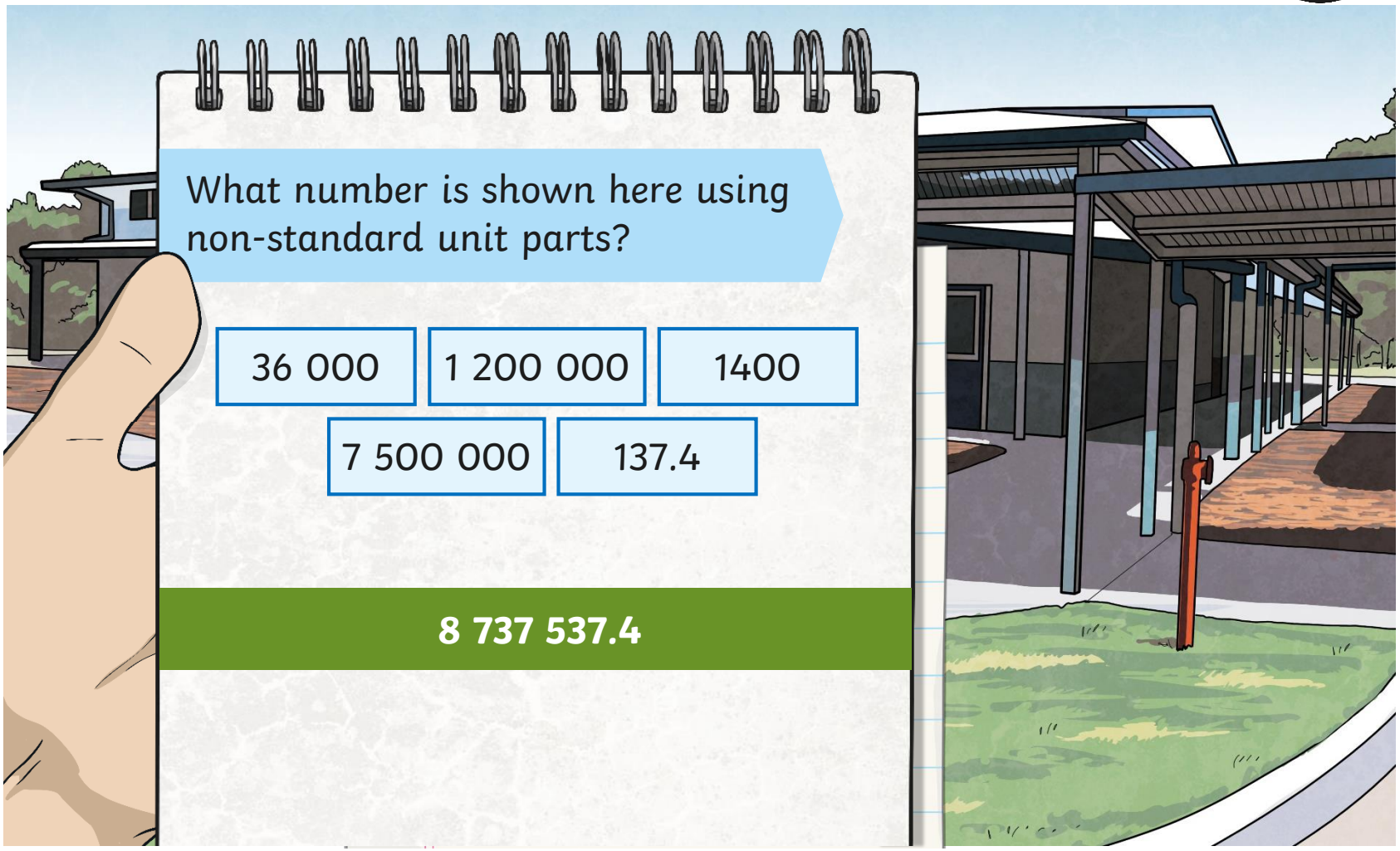
What methods did you use to compose the number from the parts?



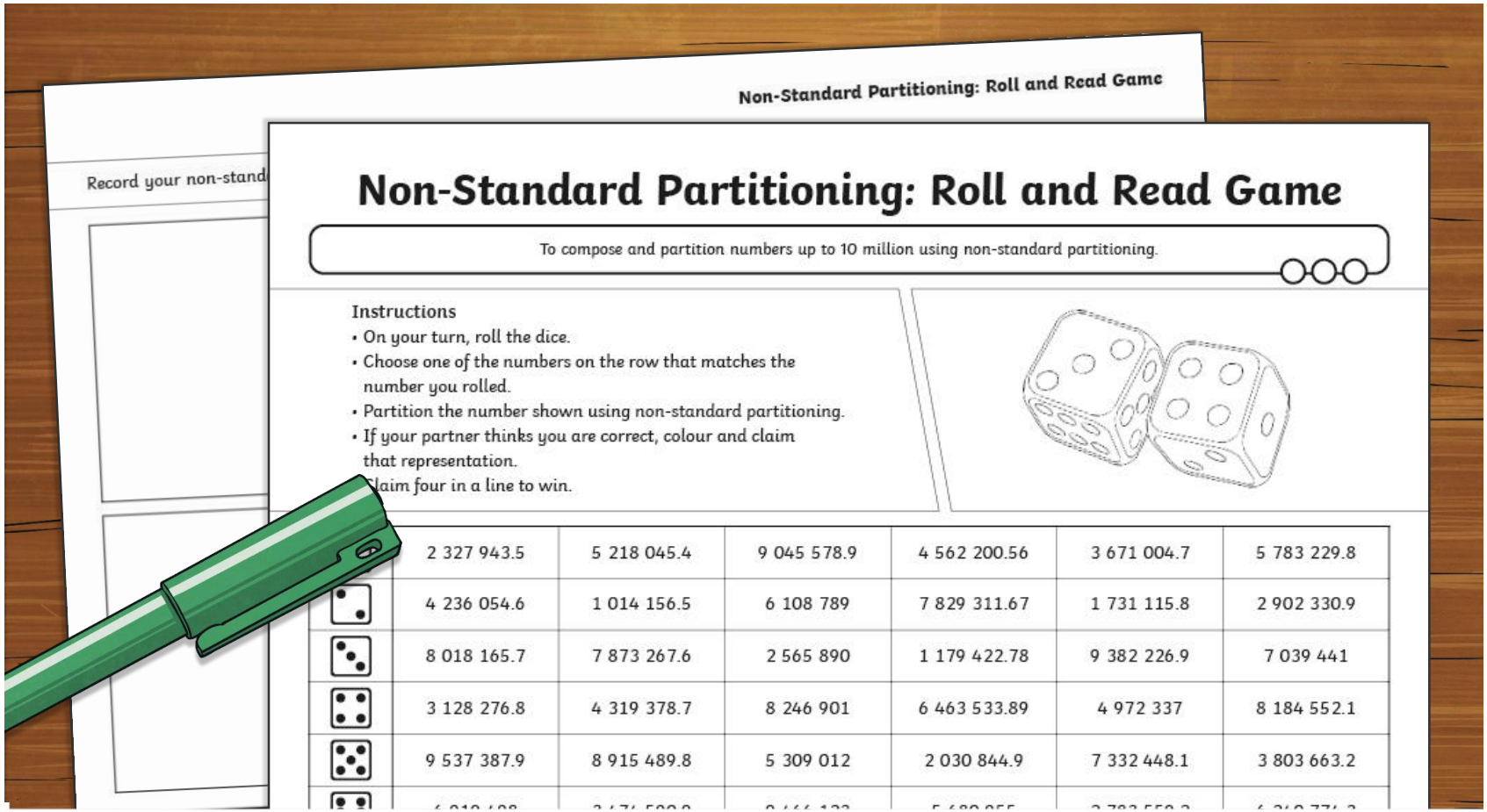
4 000 000 + 1 300 000 + 11 000 + 4000 + 20 + 17.1 + 0.2

Non-Standard Composing

Whole Class



Non-Standard Partitioning: Roll and Read Game



Numbers to 10 Million: Reasoning

Meera is correct. The order of the non-standard unit parts doesn't matter. When the all the parts are regrouped into standard unit parts she has composed the correct number.

124 000	26.2
3 400 000	2 200 000
1030	1.3
14 000	

5 million and 739 thousand and 57 ones and 5 tenths

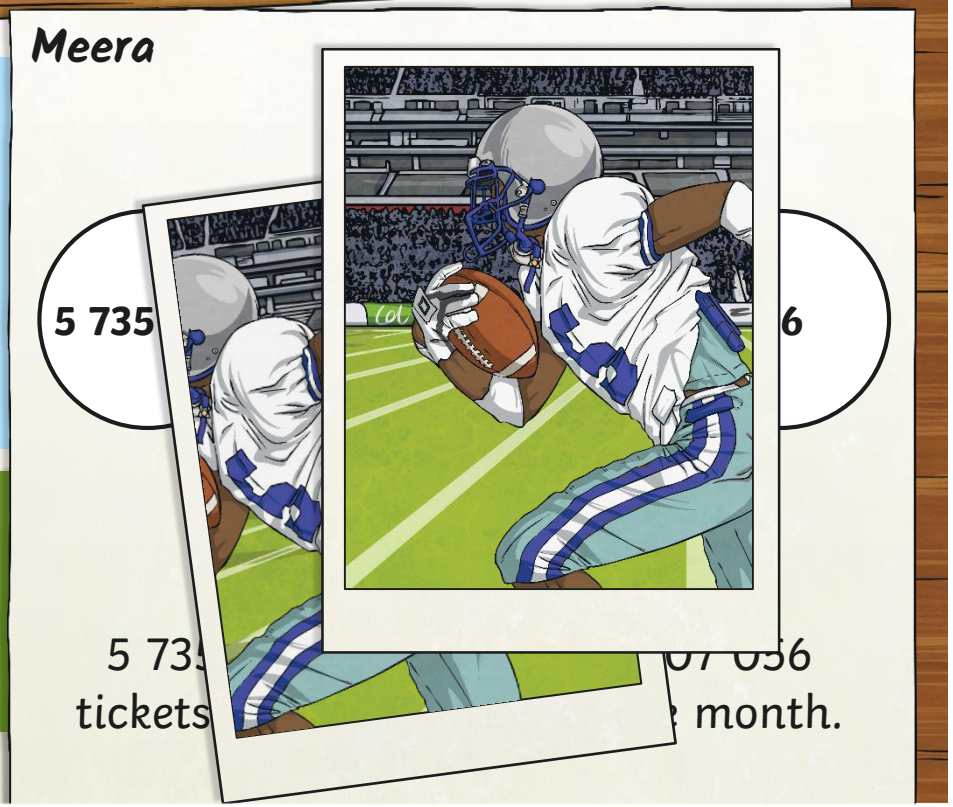
= **5 739 057.5**

Numbers to 10 Million: Reasoning

Look carefully at how Meera has used the part-whole model to solve this word problem. Is she correct? Explain your reasoning.

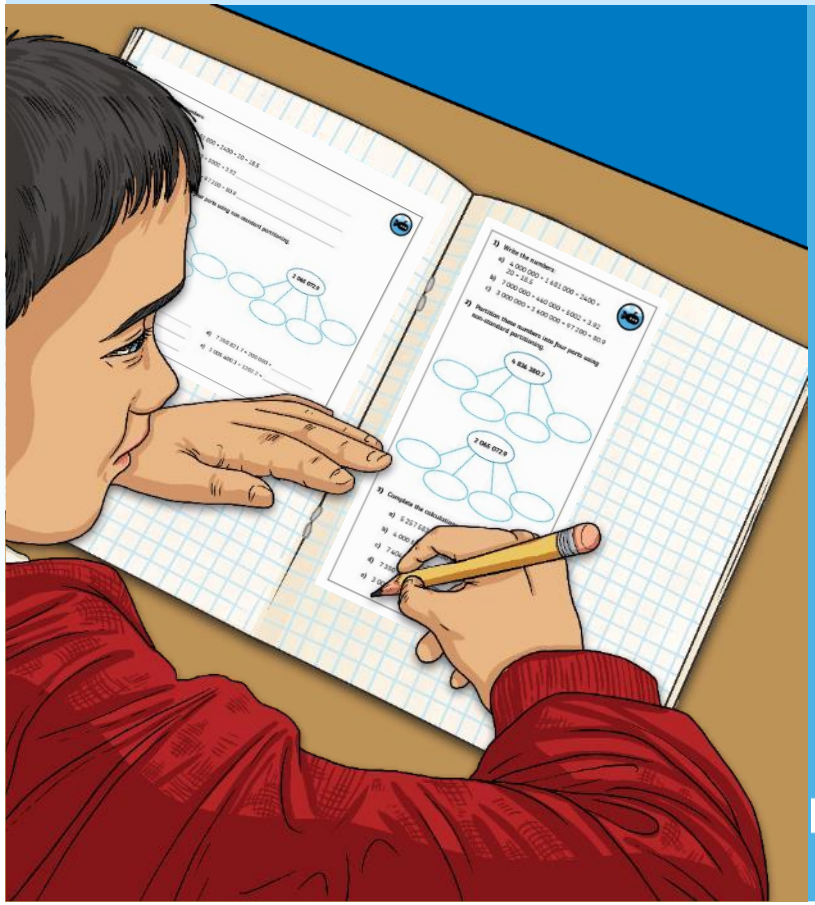
During one month, a football stadium sold 5 735 056 tickets. 28 000 of these tickets were sold in the first seven days. How many tickets were sold during the rest of the month?

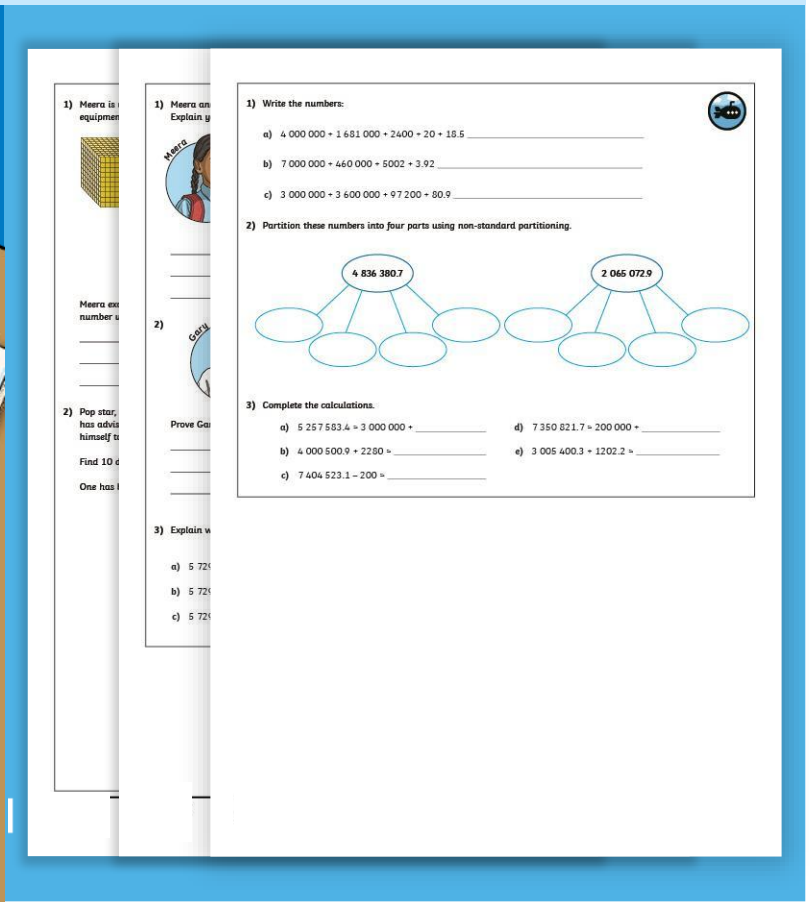
Meera is correct. Using the part-whole model to subtract a non-standard unit part is a good method.



Diving into Mastery

Dive in by completing your own activity!



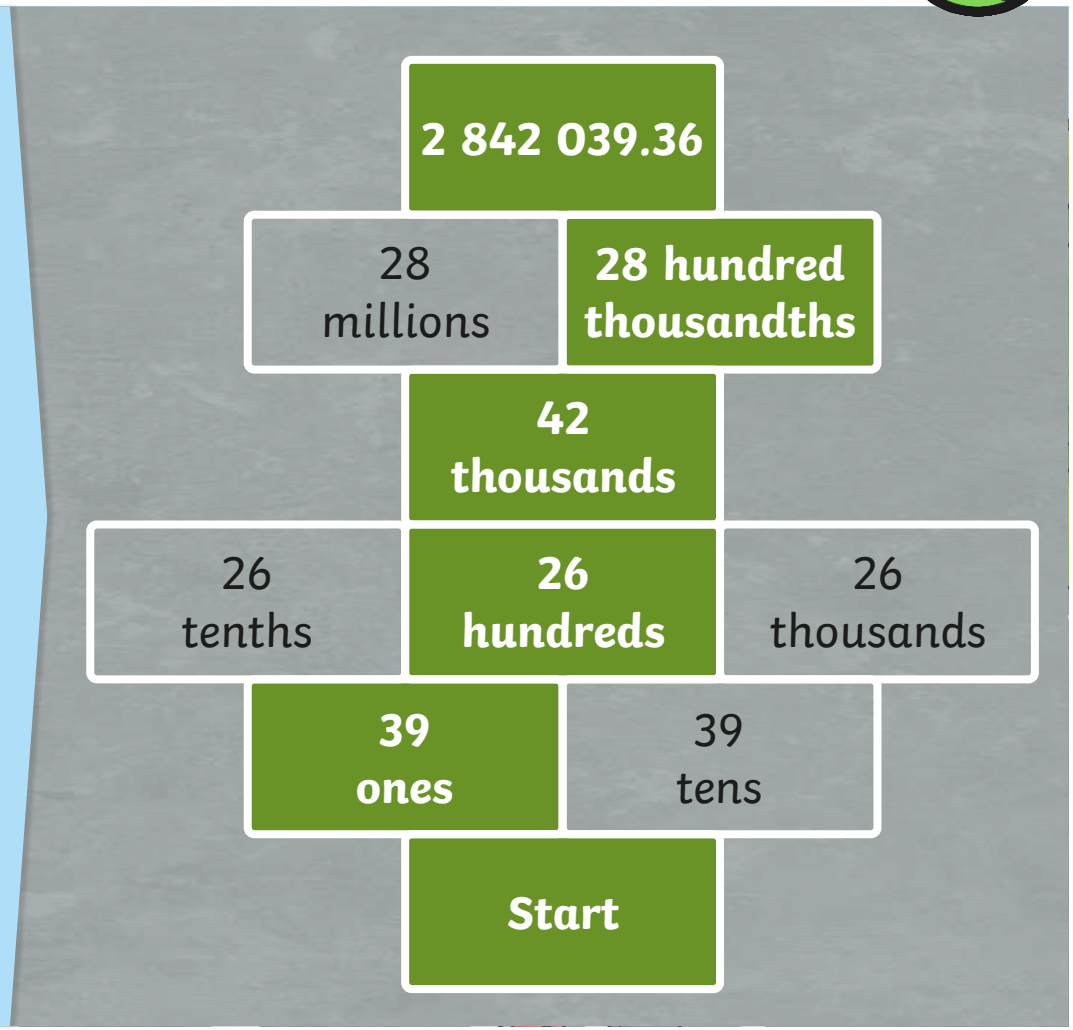


Hopscotch

Meera and Gary are playing a game of hopscotch to practise non-standard partitioning.

From the start grid, they are only allowed to hop to non-standard partitioning representations that when combined together will make the number at the end of the hopscotch.

Find a path they can follow.



Aim

- To compose and partition numbers up to 10 million using non-standard partitioning.

Success Criteria

- I can partition numbers up to 10 million in non-standard ways and write the related addition calculation.
- I can combine non-standard units to compose numbers up to 10 million and write the related addition calculation.
- I can solve problems relating to non-standard partitioning.