Master Standard Partitioning (3 Decimal Places) A

Rationale

In this step, pupils build on the place value of decimal numbers. They will combine integers and 0.1s, 0.01s and 0.001s to compose decimal numbers. Then, they partition into integers and 0.1s, 0.01s and 0.001s to decompose decimal numbers.

Pupils will vary the order of the presentation of the units in order to fully understand the composition of the number. For example, 60, 7 + 0.03 + 0.2 + 0.005 = 67.235

Key Stem Sentences

- ___ combine to make ___
- ___ partitions into ___

Key Vocabulary

- 100s / 10s / 1s / 0.1s / 0.01s / 0.001s
- compose / decompose
- combine / partition

Common Errors or Misconceptions

- When the order of the units is varied, pupils may compose incorrectly. For example, 30, 5, 0.006, 0.3 and 0.01 combine to make 35.631

Key Representations

Gattegno Charts

1	2	3	4	5	6	7	●	9
0.1	0.2	0.3	0.4	●	0.6	0.7	0.8	0.9
●	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	●	0.007	0.008	0.009

8, 0.5, 0.01 and 0.006 combine to make 8.516

10	20	30	40	50	60	70	80	●
1	●	3	4	5	6	7	8	9
0.1	0.2	●	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	●	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	0.006	●	0.008	0.009

90, 2, 0.3, 0.04 and 0.007 combine to make 92.347

●	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	●	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	●	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0.001	0.002	0.003	0.004	0.005	●	0.007	0.008	0.009

105.806 partitions into 100, 5, 0.8 and 0.006

Pupils will FLOURISH if they can...

- combine standard place value parts into numbers with 3 decimal places.
- partition numbers with 3 decimal places into standard place value parts.
- explain their understanding in multiple ways using their own words and representations.