

# Master Powers of 10 More and Less (7 digits)

## Rationale

In this step, pupils will build on their understanding of finding 1, 10, 100, 1,000, 10,000 and 100,000 more and less than a given number in Year 5 to finding 1, 10, 100, 1,000, 10,000, 100,000 and 1,000,000 more and less than a given number to and across 10,000,000

Pupils will be encouraged to work mentally, supported by pictorial representations.



## Key Stem Sentences

- 1 / 10 / 100 / 1,000 / 10,000 / 100,000 / 1,000,000 more / less than \_\_\_ is \_\_\_
- \_\_\_ is 1 / 10 / 100 / 1,000 / 10,000 / 100,000 / 1,000,000 more / less than \_\_\_



## Key Vocabulary

- one / ten / hundred / thousand / ten thousand / hundred thousand / million
- more than
- less than



## Common Errors or Misconceptions

- Pupils may have difficulty when finding 1,000,000 more than a 6-digit number. For example, 1,000,000 more than 265,198 is 365,198. They may also have difficulty when finding 1,000,000 less than a 7-digit number. For example, 1,000,000 less than 1,078,053 is 178,053



## Key Representations

### Gattegno Chart

1,000,000	2,000,000	3,000,000	4,000,000	5,000,000	6,000,000	7,000,000	8,000,000	9,000,000
100,000	200,000	300,000	400,000	500,000	600,000	700,000	800,000	900,000
10,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000	90,000
1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9

1,000,000 more than 6,284,501 is 7,284,501

10,000 less than 6,284,501 is 6,274,501

### Place Value Chart with Digits

1,000,000s	100,000s	10,000s	1,000s	100s	10s	1s
3	9	0	7	2	1	4

3,908,214 is 1,000 more than 3,907,214  
3,907,114 is 100 less than 3,907,214



## Pupils will FLOURISH if they can...

- accurately find 1, 10, 100, 1,000, 10,000, 100,000 or 1,000,000 more and less than a given number.
- explain their understanding in multiple ways using their own words and representations.

