

Master Powers of 10 More and Less (5 and 6 digits)

Rationale

In this step, pupils will build on their understanding of finding 1, 10, 100 and 1,000 more and less than a given number in Year 4 by finding 1, 10, 100, 1,000, 10,000 and 100,000 more and less than a given number to and across 1,000,000

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



Key Stem Sentences

- 1 / 10 / 100 / 1,000 / 10,000 / 100,000 more / less than ___ is ___
- ___ is 1 / 10 / 100 / 1,000 / 10,000 / 100,000 more / less than ___



Key Vocabulary

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



Common Errors or Misconceptions

- Pupils may have difficulty when finding 10,000 / 100,000 more than a 4-digit / 5-digit number. For example, 10,000 more than 1,847 is 10,847. They may also have difficulty when finding 10,000 / 100,000 less than a 4-digit / 5-digit number. For example, 100,000 less than 106,013 is 16,013



Key Representations

Gattegno Chart

| | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 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 |

100,000 more than 471,392 is 571,392
10 less than 471,392 is 471,382

Place Value Charts with Digits

| 100,000s | 10,000s | 1,000s | 100s | 10s | 1s |
|----------|---------|--------|------|-----|----|
| 5 | 0 | 6 | 8 | 7 | 4 |

506,974 is 100 more than 506,874
506,873 is 1 less than 506,874



Pupils will FLOURISH if they can...

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

