

Maths - Year 6

Number and the Number System 1: Working with numbers beyond a million and decimals

Key Vocabulary

| | |
|-------------------|--|
| Place value terms | Ten million, million, hundred thousand, ten thousand, thousand, hundred, tens, ones, tenths, hundredths, thousandths. |
| Decimal point | A point (small dot) used to separate the whole number part from the fractional part of a number. |
| Ascending | Increasing in size. |
| Descending | Decreasing in size. |
| Interval | The distance between two points or the numbers between two values. |
| Rounding | Increasing or decreasing a number or amount to make it closer to (usually) a multiple of ten, or a whole measuring unit, e.g. rounding 353 to 350 or 89 cm to 1 metre. |
| Exchange | Transferring digits from one place value column to another to support calculating. |

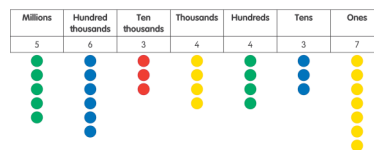
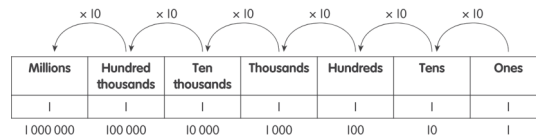
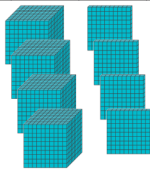
Mathematical Skills

- Read large and decimal numbers correctly, represent them with images or apparatus and say the value of each digit.
- Notice the pattern of powers of 10 within the number system and can make numbers 10 times bigger or smaller.
- Order whole numbers and explain why one number is larger or smaller than another.
- Recognise the difficulty in positioning large numbers accurately on a number line and suggest rounding to make this more manageable.
- Round large numbers to different degrees of accuracy.
- Recognise that the principle of 'one of these being equivalent to ten of those' continues indefinitely to both the right and left of the decimal point.
- Position decimal numbers correctly on a number line.

Mathematical Methods

- Ordering and comparing numbers up to 10,000,000.

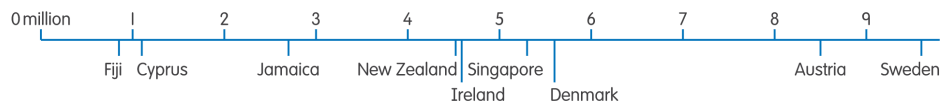
| Millions | Hundred thousands | Ten thousands | Thousands | Hundreds | Tens | Ones |
|----------|-------------------|---------------|-----------|----------|------|------|
| 5 | 6 | 3 | 4 | 4 | 3 | 7 |



- Consolidating understanding of the value of digits in numbers to 10,000,000.

- Rounding numbers beyond a million and positioning them on a number line.

| Country | Population |
|-------------|------------|
| Sweden | 9 675 885 |
| Singapore | 5 399 200 |
| Cyprus | 1 191 140 |
| New Zealand | 4 534 030 |
| Denmark | 5 634 437 |
| Jamaica | 2 717 991 |
| Austria | 8 504 850 |
| Fiji | 859 178 |
| Ireland | 4 593 100 |



- Identifying the value of digits in numbers to three decimal places.

| | | | | | | |
|-----------|-------------------|---------------|-------------|-------------|-------------|-------------|
| | $\times 10$ | $\times 10$ | $\times 10$ | $\times 10$ | $\times 10$ | $\times 10$ |
| Millions | Hundred thousands | Ten thousands | Thousands | Hundreds | Tens | Ones |
| | | | | | | |
| 1 000 000 | 100 000 | 10 000 | 1 000 | 100 | 10 | 1 |

| | | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| $\div 10$ | $\div 10$ | $\div 10$ | $\div 10$ | $\div 10$ | $\div 10$ | $\div 10$ |
| Thousands | Hundreds | Tens | Ones | tenths | hundredths | thousandths |
| | | | | | | |
| 1 000 | 100 | 10 | 1 | 0.1 | 0.01 | 0.001 |
| $\times 10$ | $\times 10$ | $\times 10$ | $\times 10$ | $\times 10$ | $\times 10$ | $\times 10$ |

Can you..?

- Identify the value of each underlined digit in these numbers. Answer in words.

4 872 635

4 293 542

6 385 293

5295.028

- Identify the value of each underlined digit in these numbers. Answer in words.

3028.409

481.276

- Order these numbers from smallest to largest.

34 333 433

43 344 334

34 433 433

43 433 443

33 434 334