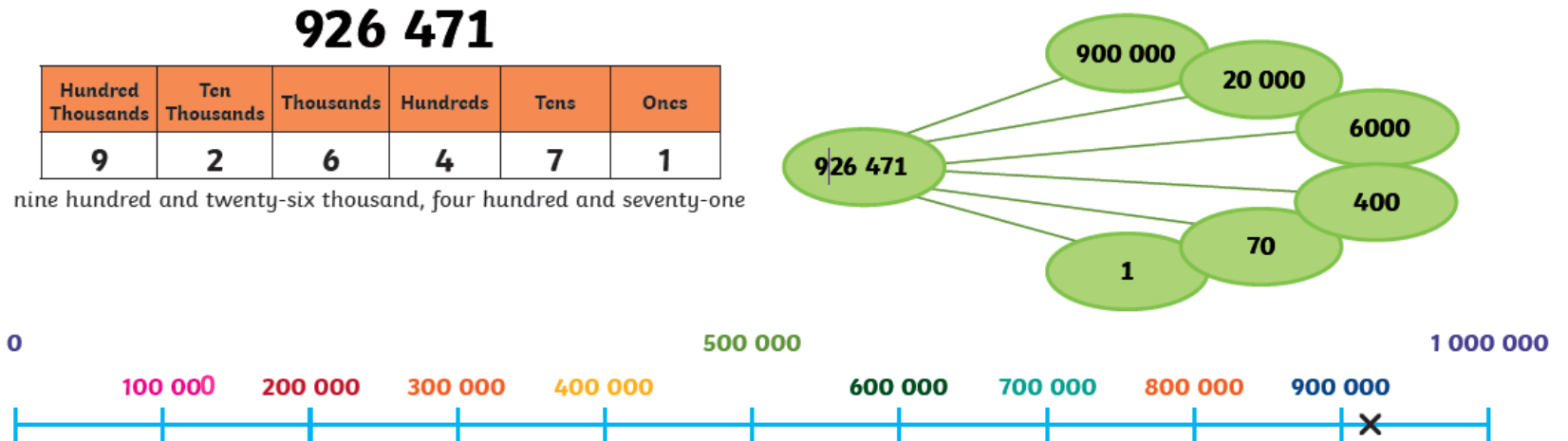


Key Vocabulary:

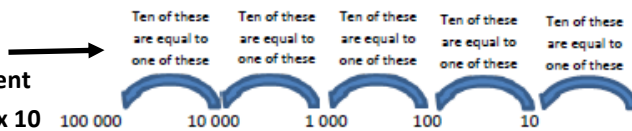
- units
- ones
- tens
- hundreds
- thousands
- ten thousands
- hundred thousands
- millions
- powers of 10
- place holder
- equal to
- estimate
- ascending
- descending
- interval
- round
- digit
- negative number
- positive number

Key learning: recognise the place value of each digit up to 1,000,000



Key learning: count forwards or backwards in powers of 10 from any given number up to 1,000,000

These are called 'powers of 10' because they are derived by multiplying 10 by itself a different number of times e.g. 100 is 10×10 and 10,000 is $10 \times 10 \times 10 \times 10$



Counting in 10s

365	375	385	395	405	415
-----	-----	-----	-----	-----	-----

The tens increase until 9 tens becomes one more hundred and 0 tens.

Counting in 100s

2841	2941	3041	3141	3241	3341
------	------	------	------	------	------

The hundreds increase until 9 hundreds becomes one more thousand and 0 hundreds.

Counting in 10 000s

276 109	286 109	296 109	306 109
---------	---------	---------	---------

The ten thousands increase until 9 ten thousands become one more hundred thousand and 0 ten thousands.

Key learning: compare and order numbers up to 1,000,000

Example:

1. When ordering numbers starting with the largest, look at the most significant digit

→ 34 769 855 824 109 341 823 002

2. Recognise what each digit is worth

→ 30 000 800 000 100 000 800 000

3. If two numbers have the same most significant digit, look at the next most significant digit and so on

→ 855 824 823 002
850 000 820 000

2. Put the numbers in order

→ 855 824 823 002 109 341 34 769

New vocabulary you will need to know



Ascending
Order from smallest to largest

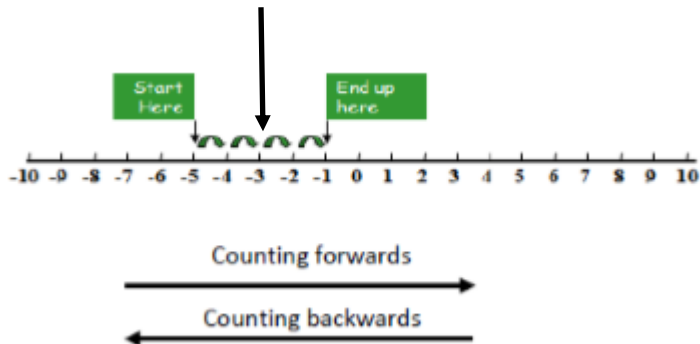


Descending
Order from largest to smallest

Key learning: count forwards and backwards with positive and negative numbers through zero

Example:

count up 4 using a number line



We use familiar contexts such as temperatures, below sea level and multi storey buildings to give meaning to positive and negative numbers.

For example:

The temperature reading on Monday morning was -5° . On Monday afternoon it had rose by 4° .

What was the new temperature reading? (Answer = -1°)

Key learning: round any number up to 1,000,000

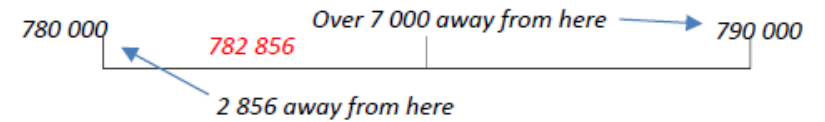
Rounding means making a number simpler but keeping it's value close to what it was. The result is less accurate, but easier to use.

Example:

Round **782,856** to the nearest 10,000

782,856 rounds to 780,000 (to the nearest 10,000) because it is only 2,856 away from this but more than 7,000 away from 790,000.

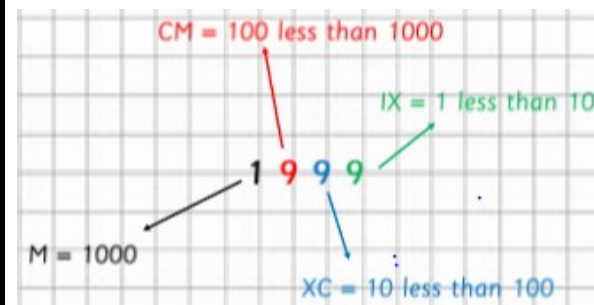
This is best modelled and understood using a number line:



Key learning: read Roman numerals up to 1000 and recognise years written in Roman numerals

	I = 1	II = 2	III = 3	
IV = 4	V = 5	VI = 6	VII = 7	VIII = 8
IX = 9	X = 10	XI = 11	XX = 20	XXX = 30
XL = 40	L = 50	LX = 60	LXX = 70	LXXX = 80
XC = 90	C = 100	CL = 150	CC = 200	CCC = 300
CD = 400	D = 500	DC = 600	DCC = 700	DCCC = 800
CM = 900	M = 1000	MC = 1100	MD = 1500	MM = 2000

Example: write 1999 in Roman numerals



Answer:

M CM XC IX