



Maths Knowledge Organiser

Year 5: Number and Place Value

Prior Knowledge (Y4 Unit 1, 2)

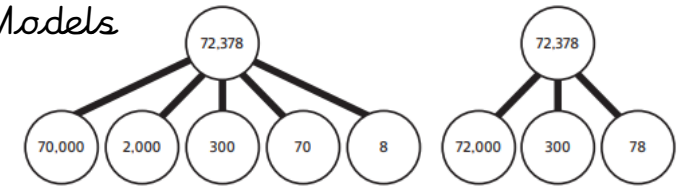
- Recognise the place value of each digit in a four-digit number
- Round any number to the nearest 10, 100 or 1,000
- Count in multiples of 6, 7, 9, 25 and 1,000
- Order and compare numbers beyond 1,000 (up to 10,000 on a number line)
- Read roman numerals to 100
- Find 1,000 more or less than a given number
- Count backwards through zero to include negative numbers

Structures and Representations

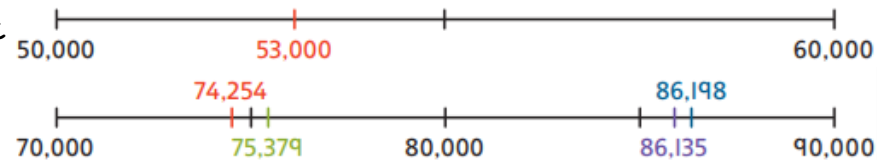
Place Value Grid

TTh	Th	H	T	O
●●●●	●●	●●●●	●	●●●

Part-Whole Models



Number Lines to 10,000



- ones (1s), tens (10s), hundreds (100s), thousands (1,000s), ten thousands (10,000s)
- place value, position
- partition, equivalent
- estimate, closer to, between
- round
- next multiple, previous multiple, nearest multiple of 10, 100, 1,000 or 10,000
- compare, order, greater than (>), less than (<)
- Roman numeral

Compare and Order



Ascending
Order *smallest to largest*



Descending
Order *largest to smallest*

> **more than** < **less than** = **equal**

equals

$$26 + 38 = 8 \times 8$$

Both calculations have the value 64.

greater than

$$223\ 873 > 98\ 256$$

The number on the left has 2 hundred thousands and the number on the right has 0 hundred thousands.

less than

$$901\ 198 < 1\ 091\ 098$$

The number on the right has 1 million and the number on the left has 0 millions.

smallest

81 782

127 352

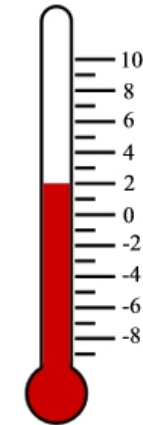
127 835

137 019

200 002

greatest

Negative Numbers



You'll most often use negative numbers when looking at temperature. Temperatures below zero will go into negative numbers.



Counting in Powers of 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 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.

Counting in 100s

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

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

Counting in 100 000s

2 972 151	3 072 151	3 172 151	3 272 151
-----------	-----------	-----------	-----------

The hundred thousands increase until 9 hundred thousands becomes one more million and 0 hundred thousands.

Rounding

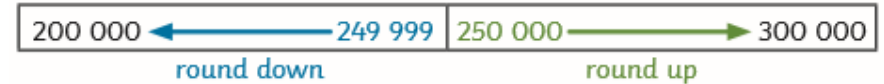
Rounding to the nearest 10



Rounding to the nearest 1000



Rounding to the nearest 100 000

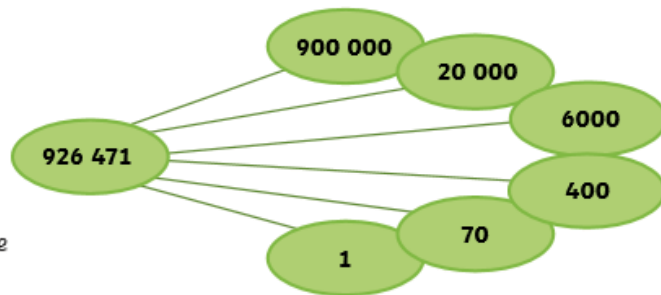


Numbers to 1 million

926 471

Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
9	2	6	4	7	1

nine hundred and twenty-six thousand, four hundred and seventy-one



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