




# Year 6 Number and Place Value

## Prior Knowledge

- Count from 0 in multiples of 4, 8, 50 and 100 (Y3); Count in multiples of 6, 7, 9, 25 and 1,000 (Y4)
- Compare and order numbers beyond 1000; use <, > and = signs (Y1-5)
- Find 10 or 100 more or less than a given number (Y3); Find 1000 more or less than a given number (Y4).
- Recognise the place value of each digit in a 4-digit number; (Y3) (Y2 = 2 digit number, Y3 = 3 digit number); Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit (Y5)
- Identify, represent and estimate numbers using different representations (Y3&4)
- Solve number problems and practical problems involving these ideas (Y2-5)
- Count backwards through 0 to include negative numbers (Y4); Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through 0 (Y5); links with Science
- Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000 (Y5)
- Read Roman numerals to 1,000 (M) and recognise years written in Roman numerals (Y4, including History & Y5).
- Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000 (Y5)

Number		Working Towards	Within	Expected	Above
	Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit				
	Round any whole number to a required degree of accuracy				
	Use negative numbers in context, and calculate intervals across 0				
	Solve number and practical problems that involve all of the above				
Highlights: _____ _____					



## Glossary

vocabulary	word class	definition
number	noun	a symbol or word that tells you how many of something there are; a numeral or figure
place value	noun	the numerical value that a digit has by virtue of its position in a number
multiples	noun	a number that may be divided by another a certain number of times without a remainder
more >		a greater or additional amount of something
less <		a smaller amount or quantity of something
equal (to) =	adjective	being the same in quantity, size, degree, or value
estimate	verb/noun	roughly calculate or judge the value, number, quantity
numerals	noun	a figure, symbol, or group of figures or symbols denoting a number
negative number	noun	less than zero
round	verb	alter (a number) to one less exact but more convenient for calculations
Roman Numeral	noun	any of the letters representing numbers in the Roman numerical system.
zero	number	no quantity or number; nought; the figure 0
digit	noun	any of the numerals from 0 to 9, especially when forming part of a number
powers of 10		any of the integer powers of the number ten
integer	noun	a number which is not a fraction; a whole number



10,000,000s	1,000,000s	100,000s	10,000s	1,000s	100s	10s	1
10 millions	millions	hundred thousands	ten thousands	thousands	hundreds	tens	ones



ten million

millions

thousands

hundreds

tens

ones

zero

place value

greater than

less than

order

round

rounded

negative number

partition

digit

interval

sequence

linear sequence

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

$$3 - 8 = -5$$

$$-6 + 11 = 5$$



Rounding to the nearest 1000



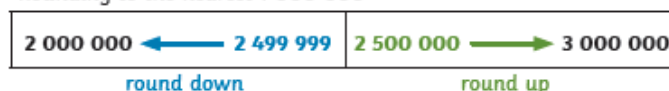
Rounding to the nearest 10 000



Rounding to the nearest 100 000



Rounding to the nearest 1 000 000



# 3 926 471

Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
3	9	2	6	4	7	1

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



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## Future Learning

### Key Stage 3

- consolidate numerical and mathematical capability from key stage 2 and extend understanding of the number system and place value to include decimals, fractions, powers and roots
- understand and use place value for decimals, measures and integers of any size
- order positive and negative integers, decimals and fractions; use the number line as a model for ordering of the real numbers; use the symbols =, ≠, <, ≤, ≥

### Key Stage 4

- consolidate numerical and mathematical capability from key stage 3 and extend understanding of the number system to include powers, roots {and fractional indices}
- apply systematic listing strategies, {including use of the product rule for counting}
- estimate powers and roots of any given positive number