



Mathematics Knowledge Organiser

Y6: Number

Place Value

The value of a digit is based on its place in the number. Each column has a value 10 x the column to the right

TM	M	HTh	TTh	Th	H	T	O
						4	6

Read, write and spell: **million, thousand, hundred**, all multiples of ten and numbers one to twenty.



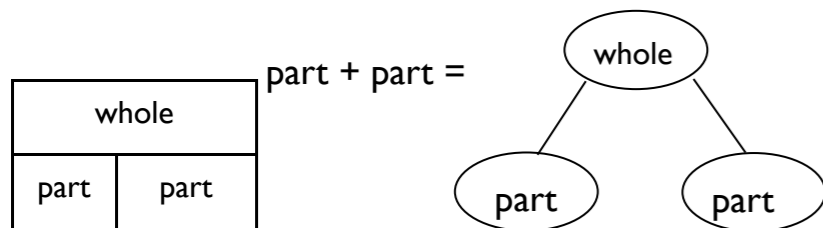
11 200 146

Eleven million, two hundred thousand, one hundred and forty-six



Calculations and Equations

Composition and decomposition of numbers e.g. $23 = 20 + 3 = 19 + 4 = 18 + 5$ etc.



> greater than < less than = the same as

minuend - subtrahend = difference ∴ therefore

dividend ÷ divisor = quotient

factor x factor = product ∴ because

Also: multiplicand x multiplier = product

Multiplication Facts

Rapid recall of facts to 12 x 12 including inverse and related facts.

$6 \times 3 = 18$ $18 \div 3 = 6$

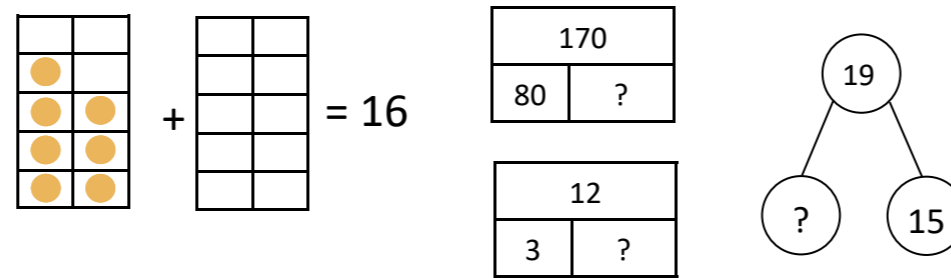
$3 \times 6 = 18$ $18 \div 6 = 3$

$30 \times 6 = 180$ $0.3 \times 6 = 1.8$

$30 \times 60 = 1800$ $0.3 \times 0.6 = 0.18$

Number Bonds

Instant recall of all number bonds to 20 and multiples of 10 over 100



Order of Operations

Roman Numerals

BIDMAS

$() n^2 \div \times + -$



1000 100 10 1
MeDiCaL XaVier
500 50 5

Integer: a number that can be written whole i.e. without a fraction element

Positive: an integer greater than zero e.g. 1, 5, 678

Negative: and integer less than zero e.g. -4, -567

Digit: numbers are made up of ten symbols 1-9 and 0

Commutative: addition and multiplication calculations can be done in any order so $4 \times 3 \times 2 = 2 \times 3 \times 4 = 3 \times 2 \times 4$ etc.

Prime Numbers

A number greater than 1 whose only factors are 1 and itself.

	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Square = $n \times n$

Cube = $n \times n \times n$

Square and Cube Numbers

n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
n^2	1	4	9	16	25	36	49	64	81	100	121	144	169	196	225
n^3	1	8	27	64	125	216	343	512	729	1000	1331	1728	2197	2744	3375

Multiples

For discussion of **multiplicative** relationships.

