

# Year 4, Term 2 Knowledge Organiser for Multiplication and Division and Addition and Subtraction.

## Multiplication and Division

### Manipulatives and strategies

You Can Do all the multiplication facts of 6.

0	x	6	=	0	=	6	x	0
1	x	6	=	6	=	6	x	1
2	x	6	=	12	=	6	x	2
3	x	6	=	18	=	6	x	3
4	x	6	=	24	=	6	x	4
5	x	6	=	30	=	6	x	5
6	x	6	=	36	=	6	x	6
7	x	6	=	42	=	6	x	7
8	x	6	=	48	=	6	x	8
9	x	6	=	54	=	6	x	9
10	x	6	=	60	=	6	x	10
11	x	6	=	66	=	6	x	11
12	x	6	=	72	=	6	x	12

If I know... then I also know...

The digit sum of multiples of 6 is 3, 6 or 9

All multiples of 6 are even numbers.

You Can Do all the multiplication facts of 9.

0	x	9	=	0	=	9	x	0
1	x	9	=	9	=	9	x	1
2	x	9	=	18	=	9	x	2
3	x	9	=	27	=	9	x	3
4	x	9	=	36	=	9	x	4
5	x	9	=	45	=	9	x	5
6	x	9	=	54	=	9	x	6
7	x	9	=	63	=	9	x	7
8	x	9	=	72	=	9	x	8
9	x	9	=	81	=	9	x	9
10	x	9	=	90	=	9	x	10
11	x	9	=	99	=	9	x	11
12	x	9	=	108	=	9	x	12



The digit sum of multiples of 9 is 9

An odd number multiplied by 9 gives an odd product.

You Can Do all the multiplication facts of 7.

0	x	7	=	0	=	7	x	0
1	x	7	=	7	=	7	x	1
2	x	7	=	14	=	7	x	2
3	x	7	=	21	=	7	x	3
4	x	7	=	28	=	7	x	4
5	x	7	=	35	=	7	x	5
6	x	7	=	42	=	7	x	6
7	x	7	=	49	=	7	x	7
8	x	7	=	56	=	7	x	8
9	x	7	=	63	=	7	x	9
10	x	7	=	70	=	7	x	10
11	x	7	=	77	=	7	x	11
12	x	7	=	84	=	7	x	12

An odd number multiplied by 7 gives an odd product.

An even number multiplied by 7 gives an even product.

$64 \times 0 = 0$   
The product of a number and zero is zero.

$64 \times 1 = 64$   
The product of a number and 1 is the number itself.

$64 \div 1 = 64$   
The quotient when dividing a number by 1 is the number itself.

## Addition and Subtraction

### Manipulatives and strategies

$2997 + 6$   
Bridging boundaries

If I know  $7 + 6 = 13$  then...

$2300 - 800$   
Bridging boundaries by counting back in efficient steps

$3754 + 600$   
Add multiples of ten and a hundred

$3452 + 1999$   
Round then adjust

Add 2000 then subtract 1

$3995 - 4007$   
Find the difference between two numbers

$5451 - 1999$   
Round then adjust

Take away 2000 then add 1

### Vocabulary and meanings

<b>Digit/numerals</b>	A single number to represent values in mathematics
<b>zero</b>	Holds a place in a number or represents nothing.
<b>odd</b>	A number that is NOT divisible by 2.
<b>even</b>	A number that IS divisible by 2.
<b>factor</b>	A number that times by another number for an answer (product).
<b>product</b>	The result (answer) when you multiply 2 numbers (factors) together.
<b>multiple</b>	A product (answer that is part of a times table (where the same number is repeatedly added).
<b>divisible</b>	Numbers that divide a number equally with no remainder.

### Vocabulary and meanings

<b>ones</b>	1-digit number = 1 - 9
<b>tens</b>	2-digit numbers = 10 - 99
<b>hundreds</b>	3-digit numbers = 100 - 999
<b>thousand s</b>	4-digit numbers = 1000 - 9999
<b>sum</b>	The answer when adding numbers together.
<b>bridge</b>	Adding 2 numbers where the sum is 10 or more.
<b>exchange</b>	When you exchange a 10 from the tens column to 10 ones in the ones column.