Foundation Maths Organiser
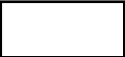
Numbers To 20

Numbers To 20
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

Number Bonds Within 5

1	2	3	4	5
0 + 1	0 + 2	0 + 3	0 + 4	0 + 5
	1 + 1	1 + 2	1 + 3	1 + 4
			2 + 2	2 + 3

Doubles

0	0
1	2
2	4
3	6
4	8
5	10

Halves

0	0
2	1
4	2
6	3
8	4
10	5
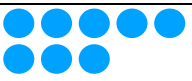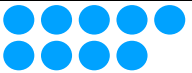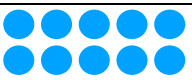
Language

5 + 3	Addition
8 - 3	Subtraction
+	Plus
-	Subtract
=	Is Equal To

Quantity To 10

1	●	6	●●●●● ●
2	●●	7	●●●●● ●●
3	●●●	8	●●●●● ●●●
4	●●●●	9	●●●●● ●●●●
5	●●●●●	10	●●●●● ●●●●●

Shapes

circle	○
triangle	△
square	□
rectangle	▭

Pattern

Colour	[blue][green][blue][green]	blue, green, blue, green
Size	(big, small, big, small bears)	big, small, big, small
Length	(tall, short, tall, short figures)	tall, short, tall, short

Months Of The Year

January	February	March
April	May	June
July	August	September
October	November	December

Capacity

Empty	Half Full	Full

Time

O'Clock	(clock face)	The minute hand points to twelve and the hour hand points to the hour.

Weight

Heavy / Heavier / Heaviest	(scales)
Light / Lighter / Lightest	(scales)
Balanced / Equal	(scales)
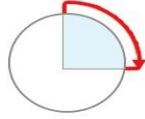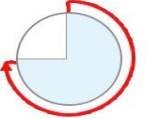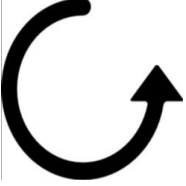
Year One Maths Organiser

Doubles

6	12
7	14
8	16
9	18
10	20
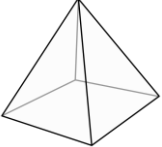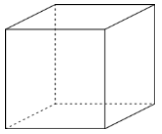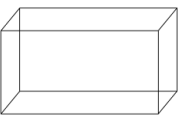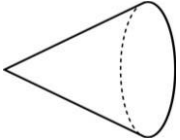
Halves

12	6
14	7
16	8
18	9
20	10

2D Shapes

circle	1 curved side 0 vertices
triangle	3 straight sides 3 vertices
rectangle	4 straight sides 4 right-angled vertices

Numerals and Number Names

0	zero	10	ten
1	one	20	twenty
2	two	30	thirty
3	three	40	forty
4	four	50	fifty
5	five	60	sixty
6	six	70	seventy
7	seven	80	eighty
8	eight	90	ninety
9	nine	100	one hundred
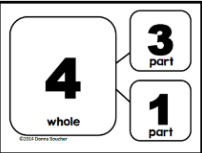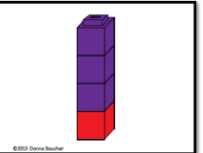
Turns

Quarter Turn	Three-quarter Turn
1 right angle quarter turn 90°	3 right angles 3 quarter turns 270°
Clockwise	Anti-Clockwise

Symbols and Language

+	plus add
-	minus subtract
=	is equal to
5 − 3 = 2	difference
odd numbers	numbers ending with 1, 3, 5, 7 or 9
even numbers	numbers ending with 2, 4, 6, 8 or 0

3D Shapes

sphere	
pyramid	
cube	
cuboid	
cone	
cylinder	

Number Bonds Within 10

6	0 + 6, 1 + 5 2 + 4, 3 + 3
7	0 + 7, 1 + 6 2 + 5, 3 + 4
8	0 + 8, 1 + 7, 2 + 6 3 + 5, 4 + 4
9	0 + 9, 1 + 8, 2 + 7 3 + 6, 4 + 5
10	0 + 10, 1 + 9, 2 + 8 3 + 7, 4 + 6, 5 + 5

Time

Half Past		The long minute hand points to six and the short hour hand points past the hour.
24 hours in a day.		60 minutes in an hour
60 seconds in a minute		
A.M. - Morning		P.M. - Afternoon
Midday – 12:00PM		Midnight – 12:00AM

Derived Facts

part + part = whole	3 + 1 = 4
part + part = whole	1 + 3 = 4
whole - part = part	4 - 3 = 1
whole - part = part	4 - 1 = 3

Place Value Grid

	tens	ones
Numeral	10	1
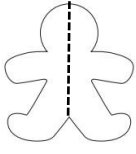
Year Two Maths Organiser

Doubles

11	22
12	24
13	26
14	28
15	30
16	32
17	34
18	36
19	38
20	40
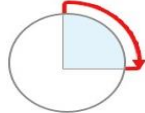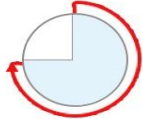
Halves

22	11
24	12
26	13
28	14
30	15
32	16
34	17
36	18
38	19
40	20

Bonds To 20

0	20
1	19
2	18
3	17
4	16
5	15
6	14
7	13
8	12
9	11
10	10

Bonds Up To 20

19 = 0 + 19	19 = 5 + 14
19 = 1 + 18	19 = 6 + 13
19 = 2 + 17	19 = 7 + 12
19 = 3 + 16	19 = 8 + 11
19 = 4 + 15	19 = 9 + 10

Derived Facts

part + part = whole	3 + 1 = 4
part + part = whole	1 + 3 = 4
whole = part + part	4 = 3 + 1
whole = part + part	4 = 1 + 3
whole - part = part	4 - 3 = 1
whole - part = part	4 - 1 = 3
part = whole - part	1 = 4 - 3
part = whole - part	3 = 4 - 1

Fractions

$\frac{1}{2}$	one half
$\frac{1}{3}$	one third
$\frac{2}{3}$	two thirds
$\frac{1}{4}$	one quarter
$\frac{3}{4}$	three quarters
$\frac{1}{5}$	one fifth
½ = 2/4	

Multiplication Tables

X	2	3	5	10
1	2	3	5	10
2	4	6	10	20
3	6	9	15	30
4	8	12	20	40
5	10	15	25	50
6	12	18	30	60
7	14	21	35	70
8	16	24	40	80
9	18	27	45	90
10	20	30	50	100
11	22	33	55	110
12	24	36	60	120
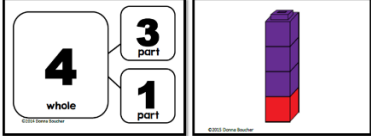
2D Shapes

Quadrilateral	Four straight sides Four vertices
Pentagon	Five straight sides Five vertices
Hexagon	Six straight sides Six vertices
Polygon	A closed shape with three or more straight sides
Regular Shape	A shape where all sides are equal and all angles are equal
Irregular Shape	A shape with sides or angles of different sizes
Has a line of symmetry	
Does not have a line of symmetry	

3D Shapes

Faces, Edge and Verticies

Turns

Quarter Turn	Three-quarter Turn
1 right angle quarter turn **90°**	3 right angles 3 quarter turns **270°**

Time

Quarter Past		The minute hand points to three and the hour hand points past the hour.
Quarter To		The minute hand points to nine and the hour hand points near the next hour.

Numbers to 1000

100	one hundred	600	six hundred
200	two hundred	700	seven hundred
300	three hundred	800	eight hundred
400	four hundred	900	nine hundred
500	five hundred	1000	one thousand

Place Value Grid

	hundreds	tens	ones
Numeral	100	10	1

Year Three Maths Organiser

Number Bonds To 100

0	100	20	80	35	65
5	95	25	75	40	60
10	90	30	70	45	55
15	85			50	50

Multiplication and Division – Derived Facts

$3 \times 4 = 12$
$4 \times 3 = 12$
$12 = 3 \times 4$
$12 = 4 \times 3$
$12 \div 3 = 4$
$12 \div 4 = 3$
$4 = 12 \div 3$
$3 = 12 \div 4$

Telling The Time

2.05	five past two
3.10	ten past three
19.20	twenty past seven
16.25	twenty-five past four
8.35	twenty-five to nine
21.40	twenty to ten
5.50	ten to six
12.55	five to one

3D Shapes

Prisms and Pyramids	

Fractions

$\frac{1}{2}$	one half
$\frac{1}{3}$	one third
$\frac{2}{3}$	two thirds
$\frac{1}{4}$	one quarter
$\frac{3}{4}$	three quarters
$\frac{1}{5}$	one fifth
$\frac{1}{6}$	one sixth
$\frac{1}{7}$	one seventh
$\frac{1}{8}$	one eighth
$\frac{1}{9}$	one ninth

Multiplication Tables

X	4	8	3	6	9
1	4	8	3	6	9
2	8	16	6	12	18
3	12	24	9	18	27
4	16	32	12	24	36
5	20	40	15	30	45
6	24	48	18	36	54
7	28	56	21	42	63
8	32	64	24	48	72
9	36	72	27	54	81
10	40	80	30	60	90
11	44	88	33	66	99
12	48	96	36	72	108

Days in a Month

January	31
February	28*
March	31
April	30
May	31
June	30
July	31
August	31
September	30
October	31
November	30
December	31

Leap year is 366 days with 29 days in February

2D Shapes

triangle	a three sided polygon
quadrilateral	a four sided polygon
pentagon	a five sided polygon
hexagon	a six sided polygon
heptagon	a seven sided polygon
octagon	an eight sided polygon
nonagon	a nine sided polygon
decagon	a ten sided polygon
hendecagon	an eleven sided polygon
dodecagon	a twelve sided polygon

Measurements

mm in a cm	10 mm = 1 cm	m in a km	1000m = 1km
mm in a m	1000 mm = 1 m	g in a kg	1000g = 1 kg
cm in a m	100 cm = 1 m	ml in a l	1000 ml = 1 l

60 seconds in a minute.	60 minutes in an hour.	24 hours in one day.
7 days in a week.		12 months in one year.

Geometry

Vertical		Parallel	
Horizontal			
Perpendicular		Right Angle	
Quarter Turn	1 right angle quarter turn 90°	Three-quarter Turn	3 right angles 3 quarter turns 270°
Half Turn	2 right angles 2 quarter turns or half turn 180°	Full Turn	4 right angles 4 quarter turns or full turn 360°
Perimeter			The total distance around the outside of a shape. Perimeter = 14cm

Place Value Grid

	thousands	hundreds	tens	ones		tenths	hundredths
Numeral	1000	100	10	1	●	0.1	0.01

Year Four Maths Organiser

Fraction Decimal Equivalence

1/10 = 0.1	4/10 = 0.4	7/10 = 0.7	10/10 = 1	¾ = 0.75
2/10 = 0.2	5/10 = 0.5	8/10 = 0.8	½ = 0.5	1/100 = 0.01
3/10 = 0.3	6/10 = 0.6	9/10 = 0.9	¼ = 0.25	23/100 = 0.23

Geometry

Perimeter		The distance around the outside of the shape.
Area		The amount of space taken up by a 2D shape.

Roman Numerals

I	1	IX	9
II	2	X	10
III	3	XI	11
IV	4	X11	12
V	5	L	50
VI	6	C	100
VII	7	D	500
VIII	8	M	1000

Coordinates

Coordinate Grid	
Finding the coordinates of a point. *(x then y)*	The point (12,5) is 12 units along, and 5 units up.

Angles

Acute Angle	1º to 89º	An **Acute Angle** is less than 90° — 54° — This is an acute angle
Right Angle	90º	90° — This is a right angle
Obtuse Angle	91º to 179º	> 90° < 180° — Obtuse Angle
Reflex Angle	181º to 359º	>180° < 360° — This is a reflex angle
Full Turn	360º	360°

Multiplication Tables

X	7	6	12	11
1	7	6	12	11
2	14	12	24	22
3	21	18	36	33
4	28	24	48	44
5	35	30	60	55
6	42	36	72	66
7	49	42	84	77
8	56	48	96	88
9	63	54	108	99
10	70	60	120	110
11	77	66	132	121
12	84	72	144	132

Triangles

Equilateral	All three sides and angles equal.	
Isosceles	Two sides and angles equal.	
Scalene	All three sides and angles of different sizes.	
Right Angled	A triangle with a right angle. Can be isosceles or scalene.	

Quadrilaterals

Rectangle	• Four sides • Opposite sides parallel • Opposite sides equal length • Four right angles	
Parallelogram	• Four sides • Opposite sides parallel	
Rhombus	• Four equal sides • Opposite sides parallel • Opposite angles equal	
Kite	• Four sides • Pairs of adjacent sides equal • Angles where adjacent sides meet are equal • Diagonals intersect at right angles	

Place Value Grid

	thousands	hundreds	tens	ones		tenths	hundredths
Numeral	1000	100	10	1	●	0.1	0.01
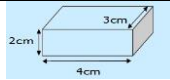
Upper KS2 Maths Organiser

Cube Numbers / Cube Roots

Cube Numbers		Cube Roots	
1^3	1	$\sqrt{1}$	1
2^3	8	$\sqrt{8}$	2
3^3	27	$\sqrt{27}$	3
4^3	64	$\sqrt{64}$	4
5^3	125	$\sqrt{125}$	5

Square Numbers / Square Roots

Square Numbers		Square Roots	
1^2	1	$\sqrt{1}$	1
2^2	4	$\sqrt{4}$	2
3^2	9	$\sqrt{9}$	3
4^2	16	$\sqrt{16}$	4
5^2	25	$\sqrt{25}$	5
6^2	36	$\sqrt{36}$	6
7^2	49	$\sqrt{49}$	7
8^2	64	$\sqrt{64}$	8
9^2	81	$\sqrt{81}$	9
10^2	100	$\sqrt{100}$	10
11^2	121	$\sqrt{121}$	11
12^2	144	$\sqrt{144}$	12
13^2	169	$\sqrt{169}$	13

Prime Numbers

2	17	41	67
3	19	43	71
5	23	47	73
7	29	53	79
11	31	59	83
13	37	61	89

Numbers

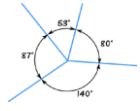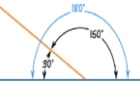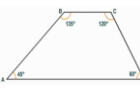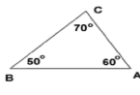|	
0	a number with no value that comes between the positive and negative numbers
positive number	a number more than 0
negative number	a number less than 0
prime number	A number with exactly two factors, itself and one.
composite number	A number with more than two factors.

Geometry

volume	
Volume = length x height x depth	

Statistics

mean	the sum of all data points divided by the number of data points

Circle Geometry

radius	a straight line from the centre to the circumference
chord	a straight line joining two points on the circumference
diameter	a chord which passes through the centre
circumference	the distance once around the circle

Roman Numerals

I	1
V	5
X	10
L	50
C	100
D	500
M	1000

Angle Totals

	Angles around a point total 360º
	Angles on a straight line total 180º
	Angles in a quadrilateral total 360º
	Angles in a triangle total 180º

Factors and Multiples

factors	numbers we multiply together to get other numbers
multiple	the result of multiplying a number by an integer
HCF	Highest Common Factor - the largest factor shared by two or more numbers
LCM	Lowest Common Multiple - the smallest number that is a multiple of two or more numbers.

Multiplication Grid

X	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

Place Value Grid

	millions	hundred thousands	ten thousands	thousands	hundreds	tens	ones		tenths	hundredths	thousandths
Numeral	1,000,000	100,000	10,000	1000	100	10	1	●	0.1	0.01	0.001