

Useful websites

<http://www.bbc.co.uk/schools/parents/resources/>

www.mathszone.co.uk

<http://www.woodlands-junior.kent.sch.uk/maths/>

<http://www.coolmath4kids.com/>

http://www.comberps.newtownards.ni.sch.uk/maths_games_for_ks1.htm

<http://www.year2maths.co.uk/numberfacts/num1/make10/make10.htm>

www.parentsintouch.co.uk

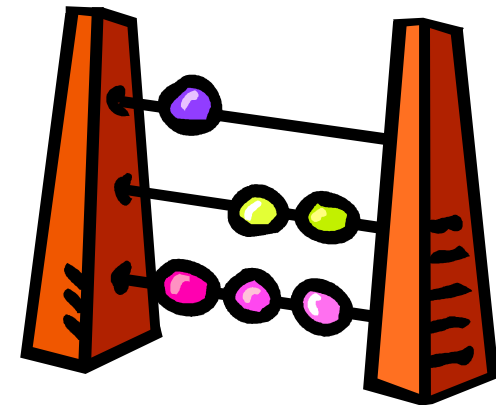
Maths is all around us and we're using it everyday!

Many of you will already be doing these mathematical activities and practising your child's numerical skills without even thinking about it!

The most important thing is to make learning maths FUN!

Booklet 4

Supporting your child with Mathematics



Whatever you do, make sure your children
ENJOY their Mathematics!

If they struggle to understand, make mistakes or get bored; keep calm, make it easier, change the subject, tell them a joke, play football, go to the park but please don't get cross or impatient - you could put them off maths for life!

Addition

Pupils are taught to carry below the line for smaller numbers

28 + 35

8 plus 5 is 13
(10 + 3)

3 from the 13

20 plus 30 is 50
50 add the
'carried' 10 is 60

'carried' 10 from
the 13

28 + 35 = 63 35 + 28 = 63
63 - 35 = 28 63 - 28 = 35

For larger numbers (hundreds) pupils use the partition (splitting) method initially

239 + 53

200 + 30 + 9 + 50 + 3 = 291

200 + 30 + 9 = 239

200 + 30 + 9 + 50 + 3 = 291

291 - 238 = 53 291 - 53 = 238

Pairs to 100

This is a game for two players.

Each draws 10 circles. Write a different two-digit number in each circle - but not a 'tens' number (10, 20, 30, 40...).

In turn, choose one of the other player's numbers.

The other player must then say what to add to that number to make 100, e.g. choose 64, they need to add 36.

If the other player is right, she crosses out the chosen number.

The first to cross out 6 numbers wins.

Dicey division

You each need a piece of paper. Each of you should choose five numbers from the list below and write them on your paper.

5 6 8 9 12 15 20 30 40 50



Take turns to roll a dice. If the number you roll divides exactly into one of your numbers then cross it out, e.g. you roll a 4, it goes into 8, cross out 8.

If you roll a 1, miss that go. If you roll a 6 have an extra go.

The first to cross out all five of their numbers wins.

Tables

Practise the 3x, 4x and 5x tables. Say them forwards and backwards.

Ask your child questions like:

What are five threes? What is 15 divided by 5?

What is seven times three? How many threes in 21?

Out and about

Choose a three-digit car number, e.g. 569.

Make a subtraction from this, e.g. 56 - 9.

Work it out in your head. Say the answer.

If you are right, score a point.

The first to get 10 points wins.



Here are a variety of number based games that you can encourage your children to play - why not play as a family?

Number game 1

You need about 20 counters or dried pasta.

Take turns. Roll two dice to make a two-digit number, e.g. if you roll a 4 and 1, this could be 41 or 14.

Add these two numbers in your head. If you are right, you win a counter. Tell your partner how you worked out the sum.

The first to get 10 counters wins.

Now try subtracting the smaller number from the larger one.

Number game 2

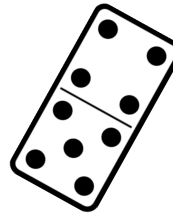
Put some dominoes face down

Shuffle them. Each chooses a domino.

Multiply the two numbers on your domino.

Whoever has the biggest answer keeps the two dominoes.

The winner is the person with the most dominoes when they have all been used.



Number game 3

Use three dice. If you have only one dice, roll it 3 times.

Make three-digit numbers, e.g. if you roll 2, 4 and 5

Ask your child to round the three-digit number to the nearest multiple of 10. Check whether it is correct, e.g.

Roll again. This time round three-digit numbers to the nearest 100.



Left overs

Take turns to choose a two-digit number less than 50.

Write it down. Now count up to it in fours. What number is left over?

The number left is the number of points you score, e.g.

The first person to get 12 or more points wins.

Choose 27.

Count: 4, 8, 12, 16, 20, 24.

3 left over to get to 27. So you score 3 points.

Now try the same game counting in threes, or in fives.

Can you spot which numbers will score you points

10

368 + 494

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

300 + 400 = 700

700 + 60 + 90 = 860

860 + 8 + 4 = 862

60 + 90 = 150

150 + 10 = 160

160 + 8 + 4 = 172

8 + 4 = 12

12 - 10 = 2

2 + 100 = 102

368 + 494 = 862 494 + 368 = 862

862 - 494 = 368 862 - 368 = 494

Pupils then progress to using the carry method with larger numbers

11

368 + 494

	3	6	8	
	+	4	9	4
	1	1	2	

3a 60 plus 90 is 150
150 add the 'carried' 10 is 160

3b 'carried' 100 from the 160

1 8 plus 4 is 12
(10 + 2)

2a 2 from the 12

2b 'carried' 10 from the 12

4

368 + 494 = 862 494 + 368 = 862

862 - 494 = 368 862 - 368 = 494

Subtraction

Pupils are encouraged to partition numbers (split) numbers

	7	5	4						
-		8	6						
	7	45	14						
-		8	6						
	6	7	14						
-		8	6						
	6	6	8						

$$\begin{array}{r} 754 \\ - 86 \\ \hline \end{array}$$

Step 1

$$\begin{array}{r} 700 + 50 + 4 \\ - \quad \quad 80 + 6 \\ \hline \end{array}$$

Step 2

$$\begin{array}{r} 700 + 40 + 14 \\ - \quad \quad 80 + 6 \\ \hline \end{array} \quad (\text{adjust from } T \text{ to } U)$$

Step 3

$$\begin{array}{r} 600 + 140 + 14 \\ - \quad \quad 80 + 6 \\ \hline 600 + 60 + 8 = 668 \end{array} \quad (\text{adjust from } H \text{ to } T)$$

This would be recorded by the pupils as

$$\begin{array}{r} 600 \quad \quad 140 \\ \cancel{700} + \cancel{50} + 14 \\ - \quad \quad 80 + 6 \\ \hline 600 + 60 + 8 = 668 \end{array}$$

This will get recorded by the pupils like this

$$72 \div 3$$

$$\begin{array}{r} 3 \overline{) 72} \\ - 30 \\ \hline 42 \\ - 30 \\ \hline 12 \\ - 6 \\ \hline 6 \\ - 6 \\ \hline 0 \end{array}$$

Answer: 24

10x
10x
2x
2x

Pupils will then be introduced to remainders and will record like the example below

69 ÷ 4

	1	7	r. 1			
4	6	9				
-	4	0				10×4
		2	9			
-		2	0			5×4
			9			
-			8			2×4
			1			

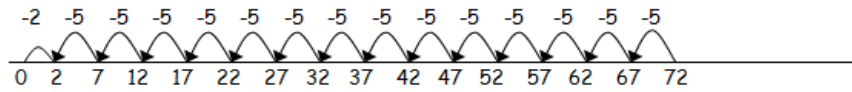
1 × 4 = 4
2 × 4 = 8
5 × 4 = 20
10 × 4 = 40

69 ÷ 4 = 17r.1 69 ÷ 17 = 4r.1
17 × 4 + 1 = 69 4 × 17 + 1 = 69

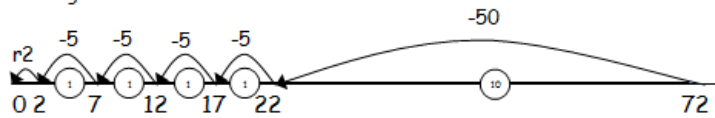
Division

Pupils develop their use of repeated subtraction to subtract multiples of the divisor

$$72 \div 5$$



Moving onto:



They then move onto the column method of recording

$75 \div 5$ 3

	1	5					
5	7	5					
-	5	0	<u>10</u>	$\times 5$			
	2	5					
-	2	5	<u>5</u>	$\times 5$			
		0					

1	$\times 5 =$	5
2	$\times 5 =$	10
5	$\times 5 =$	25
10	$\times 5 =$	50

$75 \div 5 = 15$	$75 \div 15 = 5$
$15 \times 5 = 75$	$5 \times 15 = 75$

Moving on, pupils then complete this operation using columns and carrying

$842 - 276$ 12

	3	30 minus 70		1	2 minus 6
	4	Change 800 to 700 + 100		1	Change 40 to 30 + 10
	5	700 minus 200 is 500		2	12 minus 6 is 6

7	9	1	
-	2	7	6
	5	6	6

$842 - 276 = 566$	$842 - 566 = 276$
$566 + 276 = 842$	$276 + 566 = 842$

Recorded as -

$$\begin{array}{r} 7131 \\ 842 \\ - 276 \\ \hline 668 \end{array}$$

Multiplication

Tables - pupils learn these in families

1, 2, 4 and 8 family

0	1	2	3	4	5	6	7	8	9	10
0	2	4	6	8	10	12	14	16	18	20
0	4	8	12	16	20	24	28	32	36	40
0	8	16	24	32	40	48	56	64	72	80

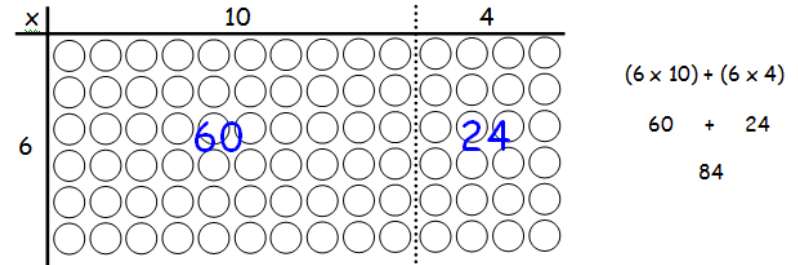
1, 5 and 10 family

0	1	2	3	4	5	6	7	8	9	10
0	10	20	30	40	50	60	70	80	90	100
0	5	10	15	20	25	30	35	40	45	50

1, 3, 6 and 9 family

0	1	2	3	4	5	6	7	8	9	10
0	3	6	9	12	15	18	21	24	27	30
0	6	12	18	24	30	36	42	48	54	60
0	9	18	27	36	45	54	63	72	81	90

Pupils build upon what they have learnt and continue to use the array method to help solve multiplication calculations



Pupils then move onto using the grid method to solve TU x U calculations

$$23 \times 8$$

Children will approximate first
 23×8 is approximately $25 \times 8 = 200$

$$\begin{array}{r}
 \oplus \\
 \times \quad 20 \quad 3 \\
 8 \quad \boxed{160} \quad \boxed{24} \\
 \hline
 160 \\
 + \quad 24 \\
 \hline
 184
 \end{array}$$

They then move onto representing the calculation in columns

