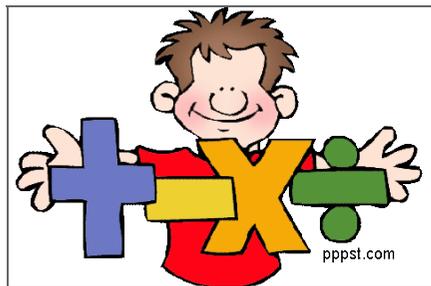
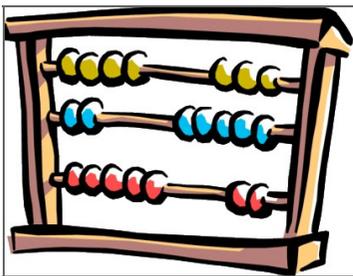


We hope this booklet helps you to help your child with their understanding of the world of mathematics



Help Your Child with Maths



Key Stage 1 Maths Booklet for Parents

- ✓ helps your child to understand some of the strategies available for them to use when solving problems.
- ✓ expands their understanding of the world around them.
- ✓ helps them to prepare for the future.
- ✓ MATHS IS FUN (honestly!)

From the beginning: as children start school they will try to make connections between the things they are learning to do at school and the mathematics they meet in their everyday lives. It is at this stage that parents are most important. The number facts children learn, and the understanding they develop, will underpin their progress through the rest of their school career.

Practising counting: at every opportunity this is always a good thing. You can help by making sure that when your child counts they match each number to the object they are counting by touching or gently moving it - this avoids mistakes!

Playing games: throwing dice, playing dominoes, as well as board games (snakes and ladders) or card games all help children's numeracy at this stage. They need to recognise the number of dots or shapes by first counting them before being able to recognise the pattern. Games are a fun context in which to acquire these skills.

Recognising and naming shapes: the best way to help your child to identify common 2-D shapes is through art and craft. They need to realise that what a shape is does not depend on which way up it is - a square is still a square even if it is standing on its point.

Golden Rules

DO 'little and often!' Counting sultanas as you eat them or stairs when going up is a much better way of rehearsing counting than sitting over a workbook.

DON'T push a skill, especially if a child is becoming confused or is feeling pressured. It always pays to talk to the teacher if you feel your child is not understanding something, rather than confuse them further by teaching them in a different way.

DO give LOTS of praise. Resist the temptation to say, 'but' or to point out mistakes every time. Children need encouragement and positive reinforcement to be confident, and a confident child makes a better learner.

DON'T force workbooks on your child. They will do plenty of writing in their Numeracy books at school. At home, you have the opportunity to help them memorise their number facts and perform mathematical calculations in their heads.

DO play games! Dice, dominoes, track games and cards all make excellent excuses for using and applying our number skills. And at the same time your child is learning the important skills of losing with grace and winning with style!

DON'T show them written sums laid out as you used to do them! Nowadays it is the development of what we call 'numerical fluency' that counts. Children need to be comfortable with numbers, to understand how they work and to be confident in doing mental calculations.

Resources

Problem Solving:

- Party Maths—preparing food for a group of people is a real problem solving opportunity; how many cups can we fill with one jug, how many pieces of pizza can we cut from each one? A great opportunity to use terms like 'half' 'quarter' and 'double'.



Measuring:

- Cooking—weighing and following instructions
- Measure yourself! - make a height strip. Keep a graph to show your growth! How much have you grown?
- Measure stuff! - use a tape measure
- Telling the time—this not only includes reading the clock, but know what month their birthday is in, days of the week, months of the year and seasons.

Internet

There are a variety of games that children can use and interact with on the internet.

Try:

www.bbc.co.uk/schools/numbertime

www.ictgames.com

Reading and writing numbers: help your child to write numbers, starting at the top and running the pencil down the numeral. Writing numbers can be practised in different mediums such as sand using their finger, or paint.

In Year 1 and Year 2 when your child starts to write 2 digit numbers, be sure to emphasise the value of the first digit, reading 65 as sixty- five, stressing that this number has 6 tens (sixty) and 5 units; $60 + 5 = 65$.

Memorising their number facts: one of the simplest and most effective ways of supporting your child's mathematical development is to ensure that they have learned their number facts off by heart. These are the pairs of numbers which add together to make all of the numbers up to and including ten. For example, children need to know that 6 can be $5 + 1$, or $4 + 2$, or $3 + 3$ and that 10 is $5 + 5$ or $4 + 6$ or $3 + 7$ or $2 + 8$ or $1 + 9$.

Telling the time: help your child to master this difficult skill by taking it in stages. First, stress the 'o-clocks'. "It's nearly five o'clock, time for tea!" Children can recognise o'clock times on a digital display (5:00) and on a clock face (big hand pointing up at the 12). Once they are good at this, introduce half past, big hand pointing down or digital 5:30. Finally teach quarter past and quarter to. This allows them to tell the time accurately enough for now!

Key Stage 1 Written Strategies

Children need to be able to explain what they are doing with the use of practical apparatus before they are encouraged to record anything. They do this by working with objects such as counters, cubes or buttons. They learn that if you have 3 buttons and take 2 more then you have 5 buttons. They are then ready to discover that when you have 3 of anything, and then get 2 more you always end up with 5, whether it is buttons, biscuits or bananas.

Children continue to use physical resources that they can touch, move, sort and count, for as long as it helps them to understand the calculations they are doing. These include animal shape counters, Multilink blocks (that clip together) and tens and units equipment.

To add successfully, children need to be able to:

- Recall all addition pairs up to 10 and which pairs of numbers add to equal 10 (number bonds)
- Add multiples of 10 using the related addition fact; $6 + 4 = 10$; $60 + 40 = 100$
- Partition or split, 2 digit and 3 digit numbers
Ex: $36 = 30 + 6$; $123 = 100 + 20 + 3$.

The aim is that children use mental methods when appropriate, but for calculations that they cannot do in their heads, they learn to use an efficient written method.

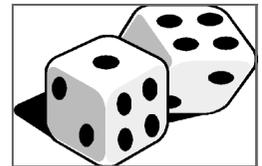
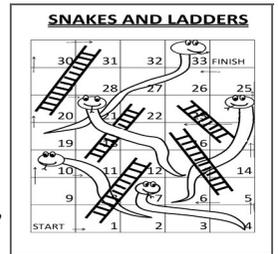
Resources

How you can help at home:

Make learning fun and part of your daily conversations.

Playing lots of different practical games with your child will really help them gain in confidence:

- Board Games, played by the whole family make maths fun!
- Snakes and ladders
- Dominoes
- Playing card games— snap, doubles
- Dice Games
- Darts
- Simple counting equipment for children to practise adding and taking away.



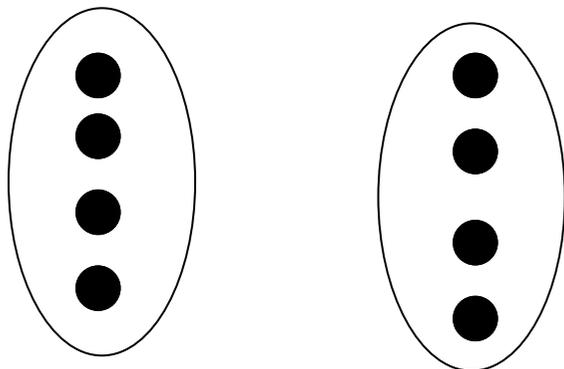
Shopping Games:

- Set up a mini supermarket
- Role play using money, getting change from 10p, 20p and 50p at the shops makes maths have a real purpose.
- Change can be the trickiest concept and needs to be taught in 'real' shopping activities which can be done really well at home.

Division

$$8 \div 2 =$$

There are 8 counters which have to be shared between 2 groups.



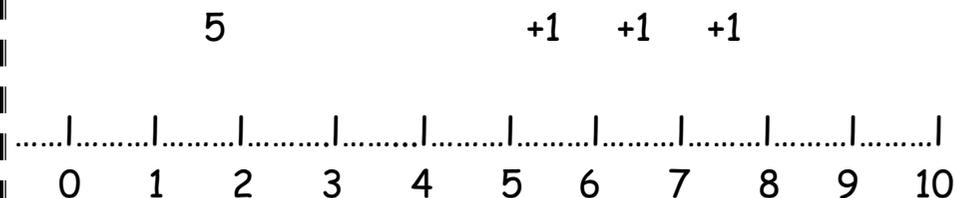
The children can see in each group there are 4 counters so the answer must be 4.

They can check the answer to this using their multiplication knowledge (inverse) $4 \text{ lots of } 2 = 8$

Addition

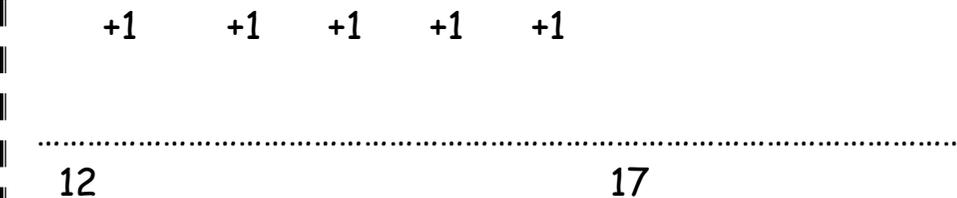
Children will be familiar with number lines and number tracks from an early stage, with the numbers written on them.

Counting on (from largest number) U + U Ex: $5 + 3 = 8$



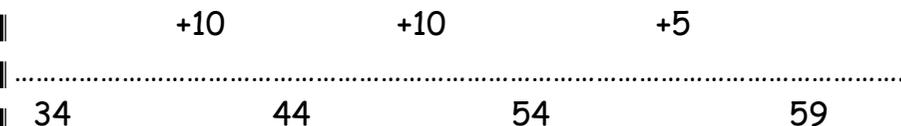
An empty number line is just a line drawn by the child, without numbers on it. The child then writes on only the numbers needed to help with the calculation.

Counting on TU + U Ex: $12 + 5 = 17$



The empty number line also helps record the steps when children need to partition the numbers into tens and units.

Ex: $34 + 25 = 59$ ($34 + 20 = 54 + 5 = 59$)



Addition using the 100 square

Similar when using the empty number line, children need to be able to partition a 2 digit number to help them add using a 100 square.

Ex: $32 + 24 =$

- Find the largest number on the 100 square (32)
- Partition the number you are adding (24) $20 + 4$.
There are 2 tens so you need to go down the column (stairs) twice, landing on 52.
- Then you add on the units, go along the row (corridor) 4 squares, where you will land on the answer, 56.

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

A little tip:

- The children use the 100 square when adding 2 digit numbers to go down the stairs (counting in tens) and along the corridor (counting in units)

Division

Division needs to be given a context, whenever possible, to ensure understanding of sharing and grouping.

Ex: if you have 10 sweets, and share them between 2 people, each person gets 5 sweets (this is sharing).

If you have 10 sweets and put them in groups of 2, you will get 5 groups; this is grouping.

With both ideas it is important to see the link with multiplication - in this case, 2 people have 5 sweets each, making 10 sweets altogether, or 5 groups of 2 make 10.

Children will do lots of sharing and grouping with apparatus, before they do any written division work. The symbol \div is then introduced for recording division calculations.

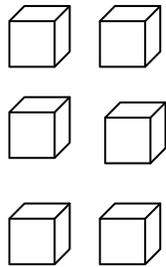
When dividing, children need to:

1. Have lots of practical examples of sharing including remainders. Ex: I have 7 apples to share between 2 of us, what shall I do?
2. Understand grouping and be able to explain arrays.
3. As with the other operations, number lines and arrays are often used as visual aids.

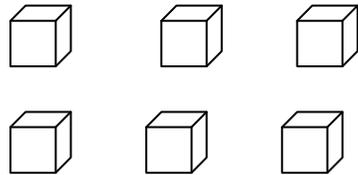
Multiplication

6. Be able to understand the inverse.

Ex:



How many groups of 2 can be made from 6?

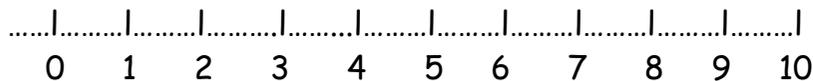


How many groups of 3 can be made from 6?

7. Count on in groups on a number square and recognise patterns

8. Count on, in groups on a number line

Ex: $3 \times 2 =$



Subtraction

Children learn about subtraction from an early stage, by 'taking away' from groups of items such as buttons and counters.

They will then count back using number lines and begin to explore the idea of difference between two numbers.

For ex: The difference between 10 and 7 is 3, which can be represented either by taking 7 away from 10, or by starting at 7, and counting on 3 in order to get to 10.

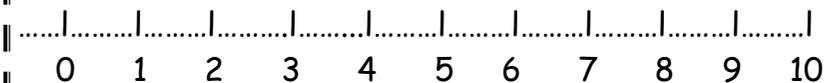
The aim, as for addition is that children use mental methods (addition and subtraction facts to 10) or practical resources to allow them visually to understand that the answer will be smaller because they are taking things away. As they move through the school they begin to use written methods.

Number Line

As with addition children will be using the number lines they are familiar with, with the numbers written on the line.

Counting back U - U Ex: $9 - 3 = 6$

-1 -1 -1



Counting back from a 2 digit number (TU), children can use an empty number line. The child then writes on only the numbers needed to help with the calculation.

Counting back TU - U Ex: $17 - 5 = 12$

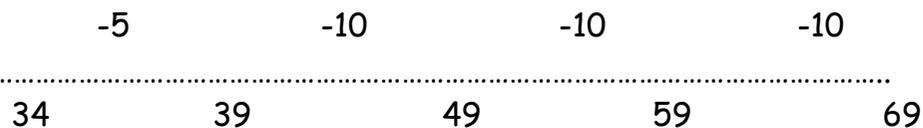
-1 -1 -1 -1 -1

12

17

The empty number line also helps record the steps when children need to partition the numbers into tens and units and use extended jumps.

Ex: $69 - 35 = 34$ ($69 - 30 = 39 - 5 = 34$)



Subtraction using a 100 square

Similar to using the empty number line, children need to be able to partition a 2 digit number to help them subtract using a 100 square.

Ex: $56 - 24 =$

- Find the largest number on the 100 square (56)
- Partition the number you are subtracting (24) $20 + 4$.
There are 2 tens so you need to go back up the column (stairs) twice, landing on 36.
- Then you subtract the units, go back along the row (corridor) 4 squares, where you will land on the answer, 32.

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

A little tip:

- The children use the 100 square when subtracting 2 digit numbers to go up the stairs (counting in tens) and back along the corridor (counting in units)

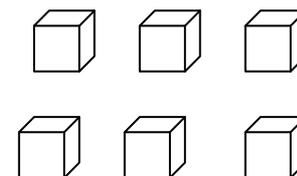
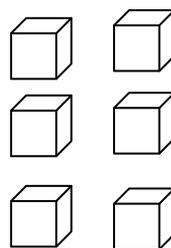
Multiplication

As with other operations, the aim is that children use mental methods when appropriate such as being able to count in 2's, 5's and 10's confidently both forwards and backwards.

When multiplying children need to:

- Be able to group objects with equal numbers and explain what they are doing clearly.
- Be able to count on and back in equal groups.
- Relate groups of the same number when counting in a number pattern.
- Be able to recognise the terms 'lots of' 'sets of' and 'groups of' as $3 \text{ lots of } 2 = 2 + 2 + 2 = 6$
- Be able to record the groups as arrays (these may be buttons, cubes or counters) and be able to give related facts

Ex :



$$\begin{aligned} 3 \text{ lots of } 2 &= \\ 2 + 2 + 2 &= \\ 3 \times 2 &= 6 \end{aligned}$$

$$\begin{aligned} 2 \text{ lots of } 3 &= \\ 3 + 3 + 3 &= \\ 2 \times 3 &= 6 \end{aligned}$$