

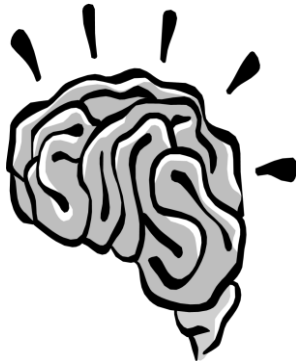
“They didn’t do it like that  
when I was at school!”



- Do your children ask for help with their maths homework and start talking in another language, using words like 'partitioning', 'chunking', 'grid multiplication'.....?
- If so, you may feel the need for some translation. This workshop is designed to explain some of the methods used to teach calculation in schools following the New Primary Curriculum 2014.

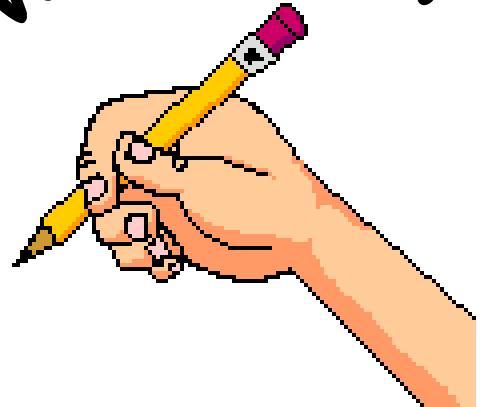
# Which is more important:

mental calculation.~



or

written.~





This will depend on the numbers involved and the individual child.

When faced with a calculation,  
no matter how large or difficult  
the numbers may appear to be,  
we should encourage children to  
ask themselves...



Can I do  
this in my  
head?

What do I know  
or can I use  
to help me?

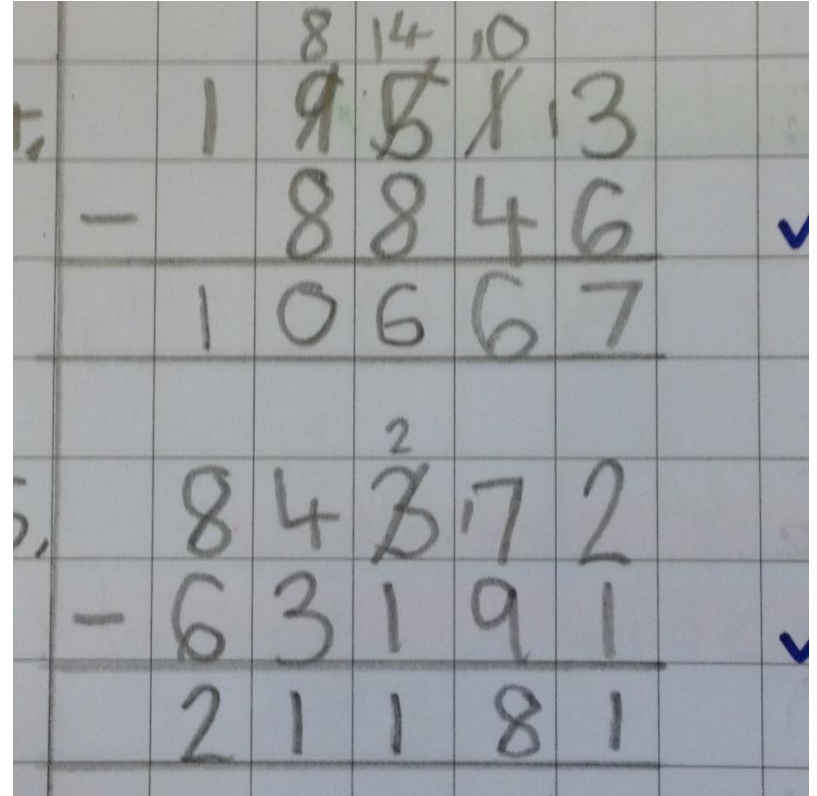
Do I know the  
approximate  
size of the  
answer?

If I can't do it  
wholly in my head,  
what do I need to  
write down in  
order to help me  
calculate the  
answer?

Will the written  
method I know  
be helpful?



# When do children need to start recording?



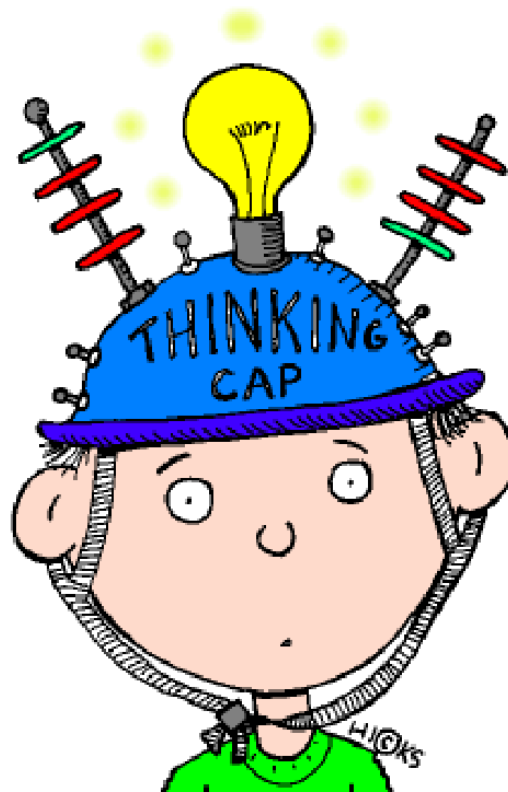
Problems will start off being verbal questions and will become more formal as they progress through Key Stage 1.

# When do children need to start recording?

- The following table shows how some sort of recording is relevant throughout the primary years with mental strategies playing an important role throughout.

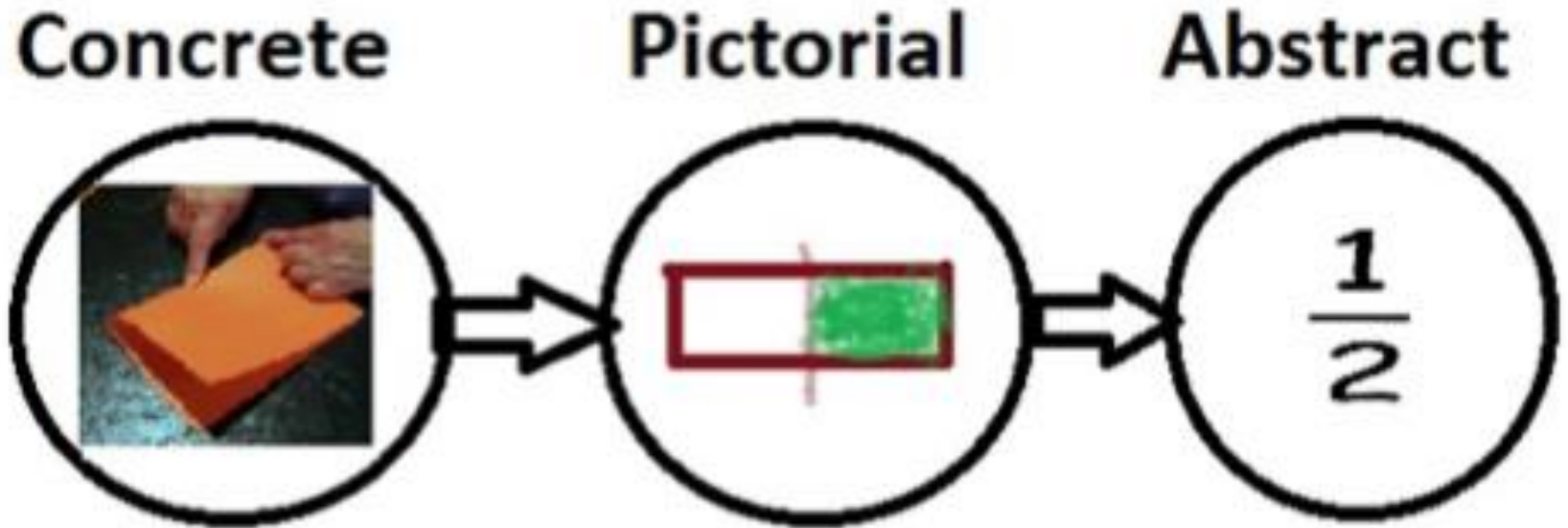
Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Making a record of a calculation</p>						
<p>Jotting to support a mental strategy</p>						
<p>Explaining a mental strategy</p>						
<p>Developing written methods to the standard method you learnt at school</p>						





It is important to encourage children to look first at the problem and then get them to decide which is the best method to choose - use of concrete resources, pictures, mental calculation with or without jottings, or more formal written recordings.

# The CPA Approach



concrete

①



Representational

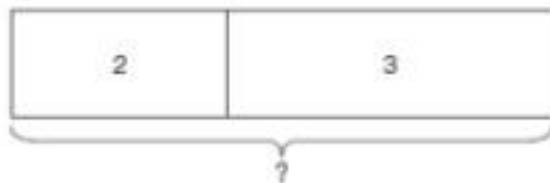


Abstract

$$4 + 5 = 9$$

②





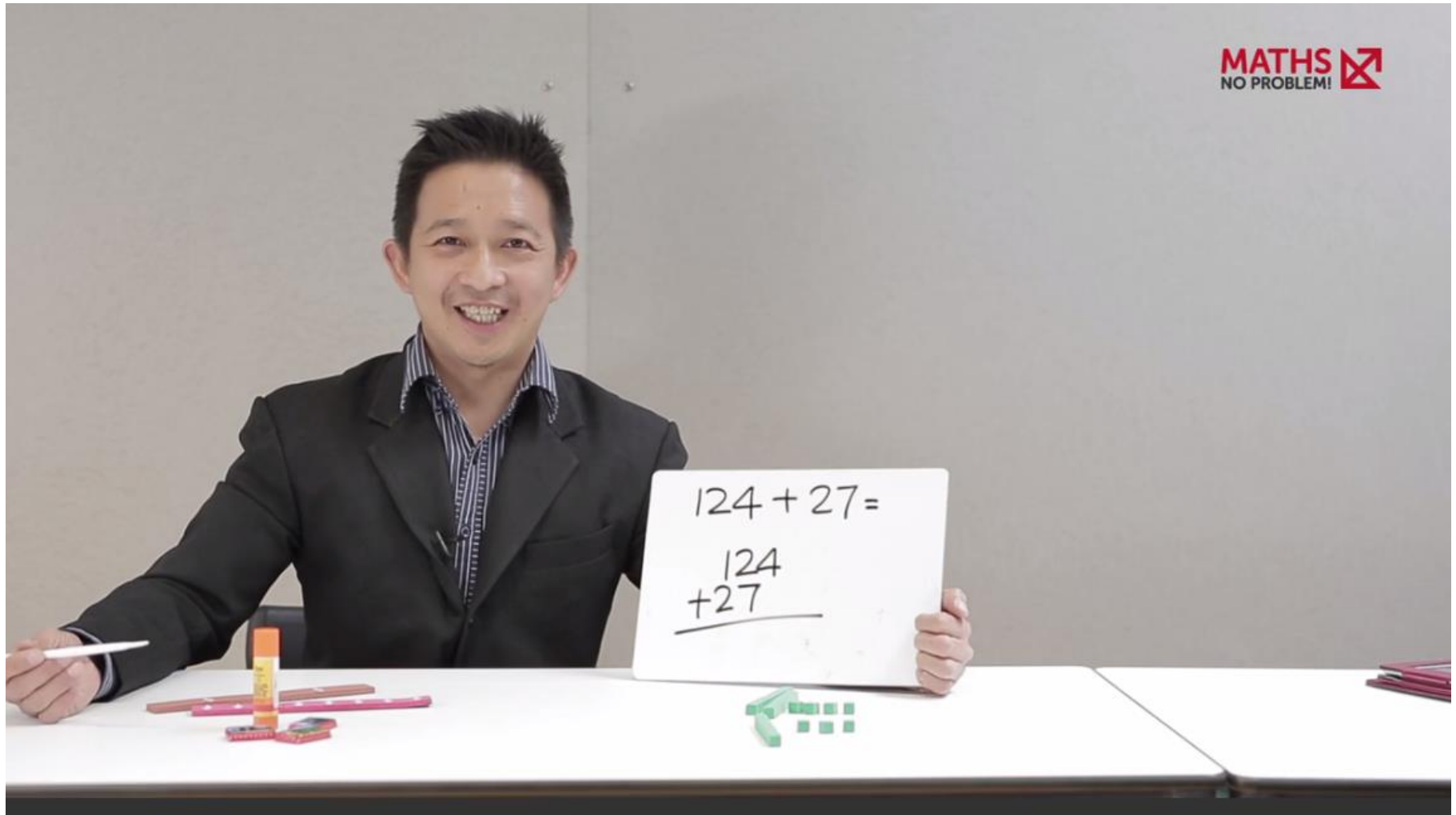
- Children attempting to use formal written methods without a secure understanding will try to remember rules, which may result in unnecessary and mistaken applications of a standard method.

$$\begin{array}{r} 24 \\ + 39 \\ \hline 513 \end{array}$$

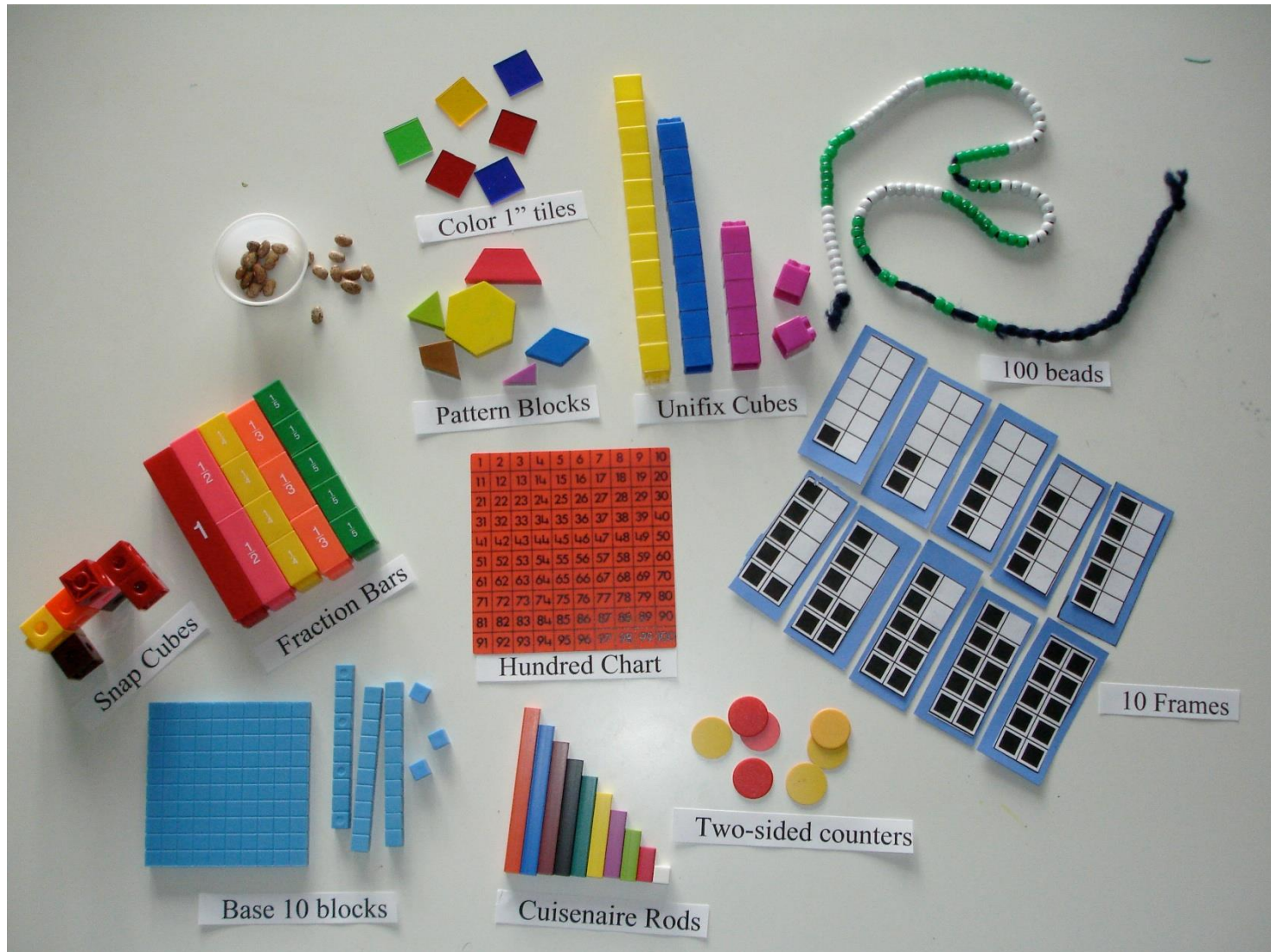
?



# Parent Videos – Fundamentals in maths

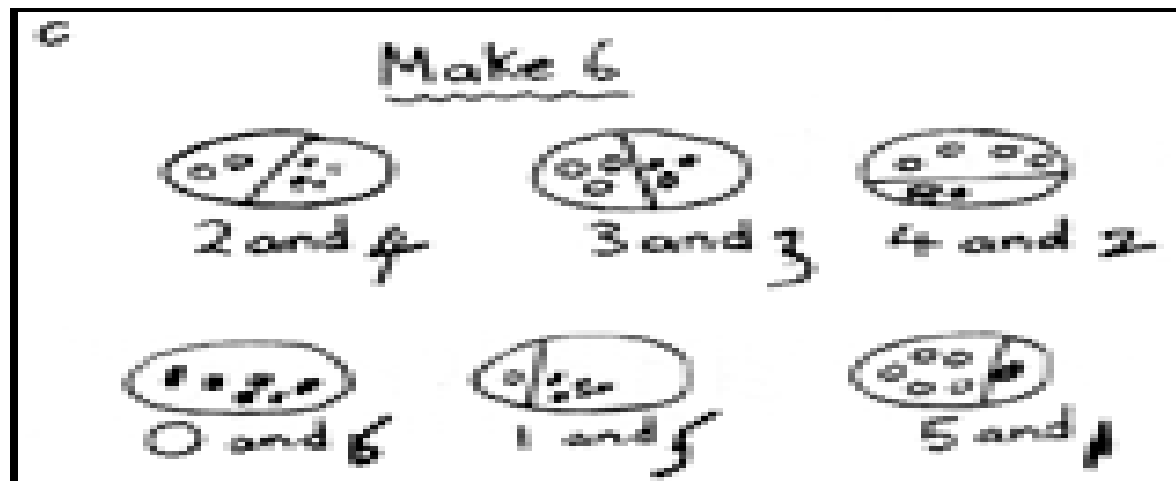


# EQUIPMENT WE USE





- Children are encouraged to develop a mental picture of the number system in their heads to use for calculation.
- They develop ways of recording calculations using pictures, etc.

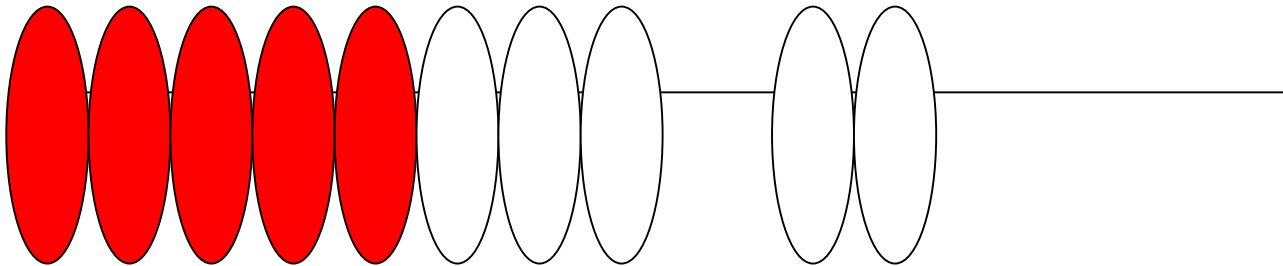




# Example

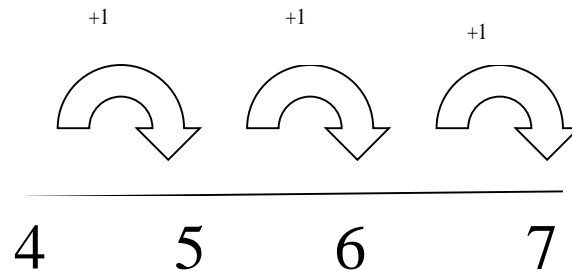
- Bead strings or bead bars can be used to illustrate addition

$$8+2=10$$



- Children then begin to use numbered lines to support their own calculations using a numbered line to count on in ones.

E.g.  $4+3=7$



# CALCULATIONS IN CONTEXT

All the methods support children in using their mental and written skills to solve calculations.

Children need to be encouraged to use the method **that they understand and can use confidently**.

It is important that children are able to choose the most appropriate method for the calculation.

Using and applying appropriate skills is very important, when calculations are needed to solve a problem.

**4 Books at £2.99 – how much altogether?**

£2.99 is almost £3.00 and so round up, multiply, then adjust:

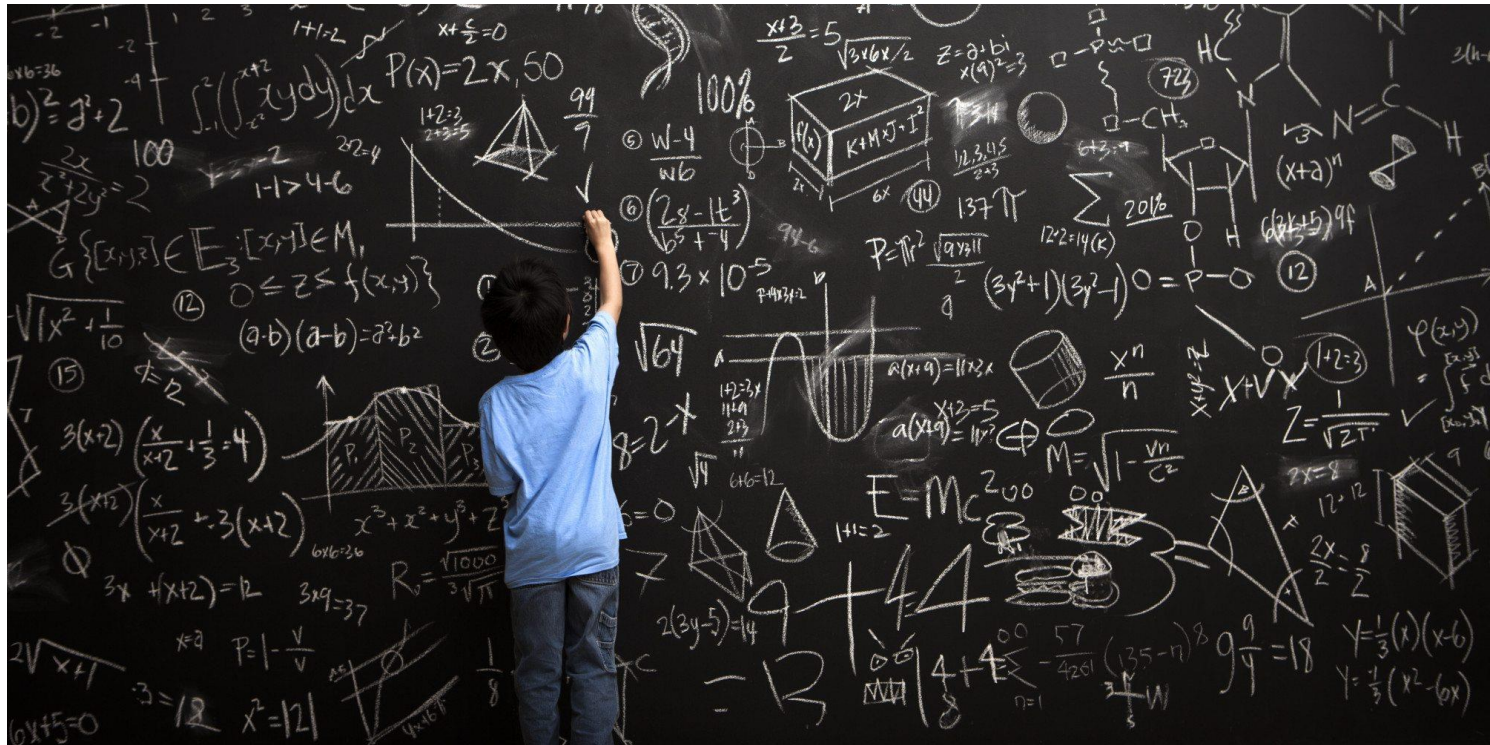
$$4 \times £3.00 = £12.00$$

$$£12.00 - 4p = £11.96$$

# Our Calculation Policies

- Calculation Policies for maths

<http://diptford.thelink.academy/policies/>



# KS1 and KS2 SATs Tests

- KS1 2017 to 2018
- KS2 2017 to 2018



# Ways to help your child at home

- Practise counting in 1s, 2s, 5s, 10s, other steps, forwards, backwards.
- Learn number bonds and bonds within them e.g.  $4 + 5 =$
- Support them in learning  $\times$  and  $\div$  facts
- Learning doubles and halves facts
- Recognising odd and even numbers
- Read and write numbers using place value not just digits speech e.g. 4567
- Support your child in learning to tell the time
- Use maths at home with them, maths is fun!



# Thank you!

It would be great to know what you would like to know more about in relation to primary maths, so I can tailor parental workshops to your wants and needs.

\*Please make a note on a post it note for me



If you have any questions then please come and see me or ask your class teacher.