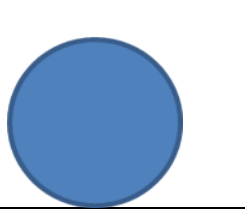
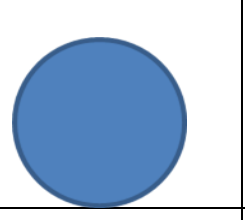
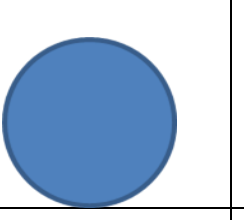
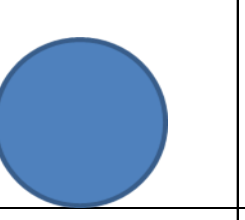
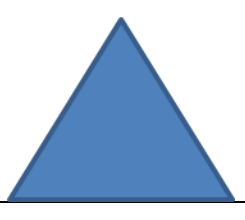

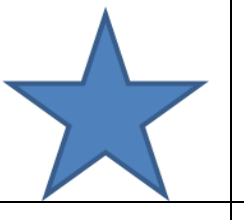
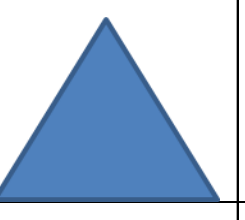
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				20
				
			26	



*Maths
Workshop
Key Stage One
March 2017*



Learning Maths



Areas of the Curriculum

- *Number and Place Value*
- *Addition and Subtraction*
- *Multiplication and Division*
- *Fractions*
- *Measures*
- *Geometry*

Back to School!



Number and Number Facts

- *Cultural change – learning things by memory and retaining them, this has to be little and often*
- *Key Facts that support all calculation e.g. number bonds (to all single digit numbers), times tables, halves and doubles of numbers.*
- *Let's Play – Bonds to 10 game*
- *Informs other number facts – to 20 and 100*



Some simple questions -

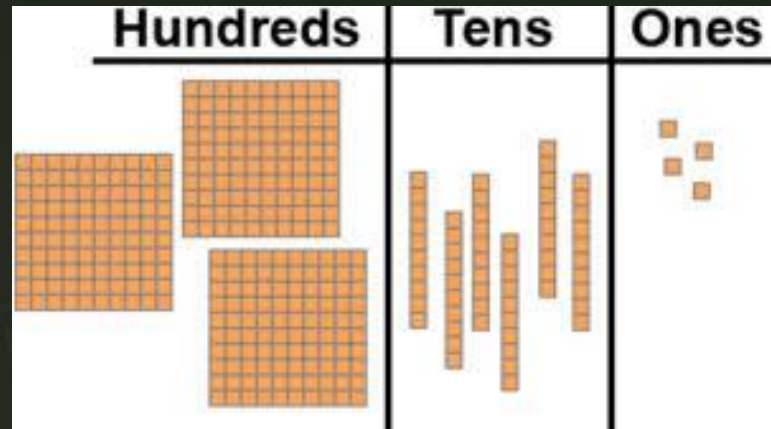
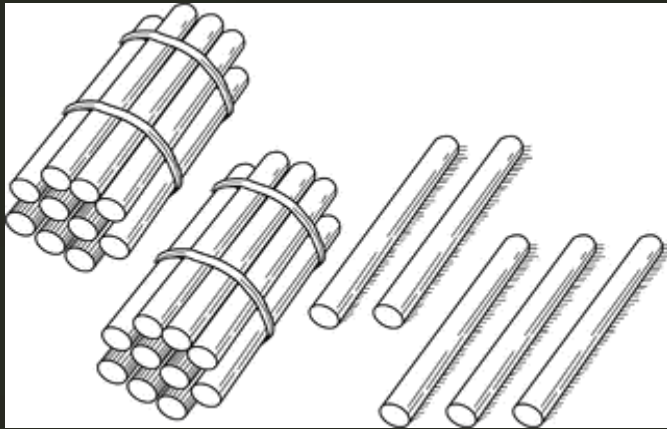
- *Can you write the number seventeen in digits?*
- *Can you write in digits, the number one hundred and one?*
- *Can you write in numbers – one pound and five pence?*
- *What is 3.4×10 ?*

Back to School!



Place Value

Models and Images to develop the concept



Let's Play ...

www.ictgames.com/sharkNumbers/sharkNumbers_v5.html

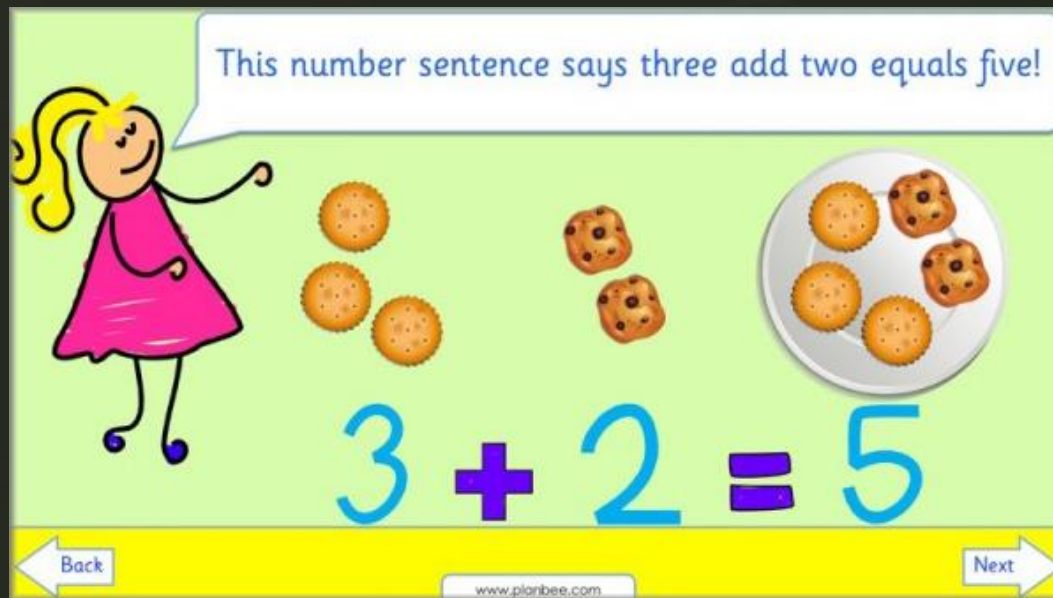
www.ictgames.com/partition.html



Addition

Progression through ...

- *Combining 2 groups of objects – concrete objects and pictorially*



This number sentence says three add two equals five!

3 + 2 = 5

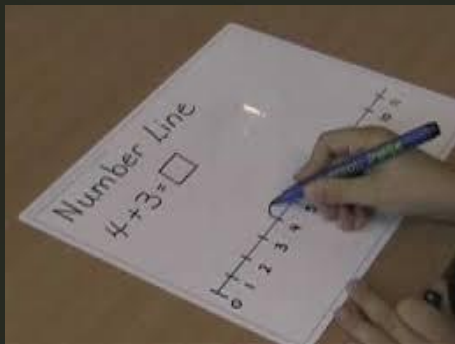
Back www.planbee.com Next

The slide features a cartoon girl with blonde hair in a pink dress pointing towards the content. To her right are three round cookies, two chocolate chip cookies, and a plate containing five cookies (three round and two chocolate chip). Below these items is the equation 3 + 2 = 5. At the bottom, there are navigation arrows for 'Back' and 'Next', and the website address 'www.planbee.com'.



Addition

- *Counting on on a marked number line*
- *Starting with the bigger number*
- *Using known number facts to support (e.g. 'nearly numbers' or looking for number bonds)*
- *Jumping on on a land marked or unmarked number line*



Addition

Once children can partition, they can use this knowledge to add using an empty number line.

Step 1 $24 + 5 = 29$

Step 2 $24 + 15 = 39$

17



Addition

- *Partitioning into 10s and 1s to combine and then recombine*

$$\begin{array}{r} 38 + 27 \\ \swarrow \quad \searrow \quad \swarrow \quad \searrow \\ 30 \quad 8 \quad 20 \quad 7 \end{array}$$

$$\begin{array}{r} 44 + 23 = 67 \\ \quad \quad \quad \swarrow \quad \searrow \\ \quad \quad \quad 20 \quad 3 \end{array}$$

A number line diagram illustrating the addition of 44 and 23. The number line starts at 44 and has two jumps: a larger jump of +20 to 64, and a smaller jump of +3 to 67. The numbers 44, 64, and 67 are marked on the line.



Subtraction

- *Try these*

$$62-6=$$

$$62-57=$$

$$162-99=$$

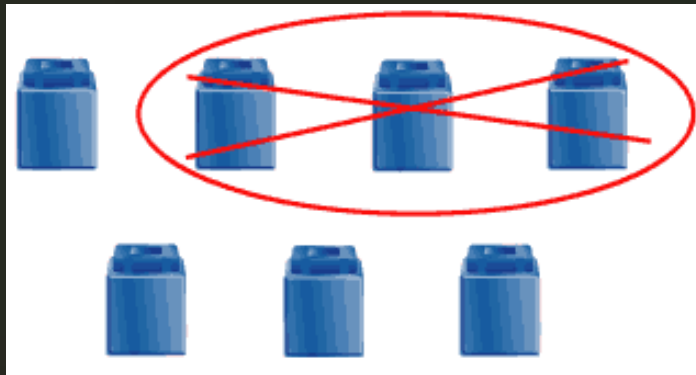
*Different methods according to the calculation
but children need an underlying concept of what
they are doing in each.*



Subtraction

Progression through

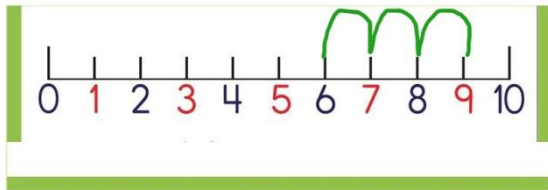
- *Taking away from a set of objects*



Subtraction...

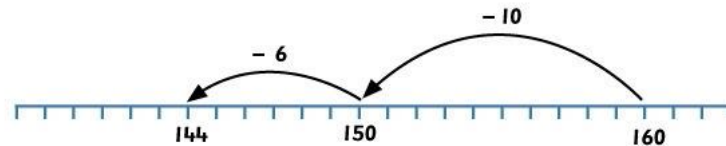
- *Counting back on a marked number line*
- *Jumping back on a land marked number line*

$$9 - 3 = 6$$



What is $160 - 16$?

Use the number line to carry out the subtraction (count back 10 from 160 to 150 and then 6 to 144).



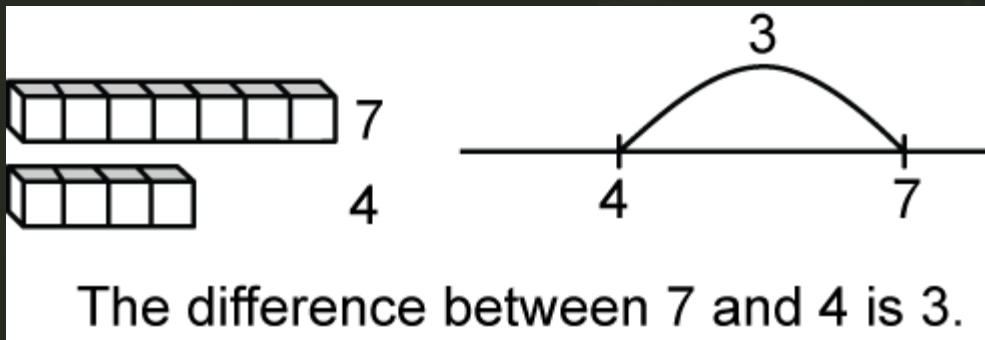
$$160 - 10 = 150$$

$$150 - 6 = 144$$



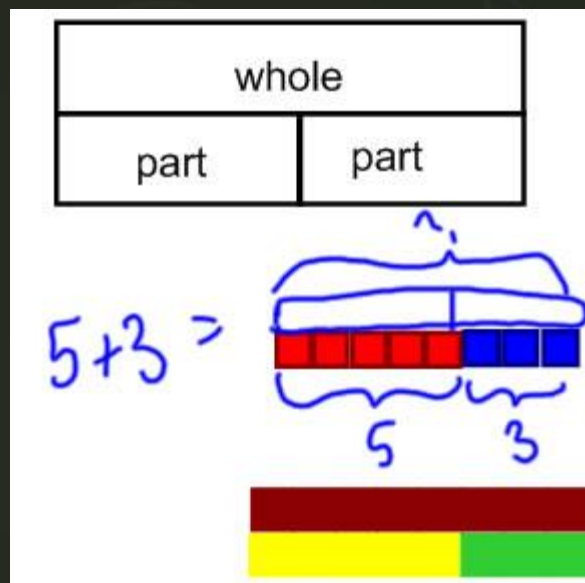
Subtraction

- *Partitioning into tens and ones*
- *Finding the difference*



Inverse Relationships

- *Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.*
- *Lets play...*



Multiplication

Progression through...

- *Step counting – 2s and 10s, then 5s and 3s*
- *Understanding double as 2 lots of the same*
- *Doubling multiples of 10*

SKIP COUNT
Counting objects in equal groups of two or more.

2, 4, 6, 8, 10, 12
3, 6, 9, 12, 15, 18
5, 10, 15, 20, 25, 30
10, 20, 30, 40, 50, 60
100, 200, 300, 400, 500

What is double 5?

5 + 5 = 10



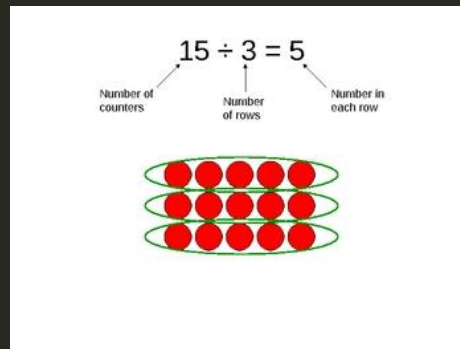
Multiplication

- *Concrete objects/ pictorial arrays*
- *Multiplication as Repeated addition*
- *Using \times to represent arrays*
- *Knowing that multiplication of 2 numbers can be done in any order (commutative)*
- *Lets Play....*



Division

- *Step Counting and beginning to see multiples in familiar counting patterns e.g. 10s*
- *Division by sharing*
- *Halving – objects and quantities*
- *Division by grouping and using arrays and jumps on the number line*



At home....

- *Look at the Calculation Policy on the Maths section of the school website*
- *Use the digit, teen and 100 grid to play some dice games*
- *Play snakes and ladders in different ways*
- *Rehearse number facts little and often*
- *Talk about maths*

