



**Boxgrove**  
Primary  
School

# EYFS/ KS1 MATHS INFORMATION FOR PARENTS/ CARERS



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Primary  
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# Maths in EYFS

# What are we working towards?

## Number ELG

Children at the expected level of development will:

- Have a deep understanding of number to 10, including the composition of each number;
- Subitise (recognise quantities without counting) up to 5;
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.

Numerical Patterns ELG Children at the expected level of development will:

- 12 - Verbally count beyond 20, recognising the pattern of the counting system;
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity;
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

# Six Areas of Maths in EYFS

## SIX KEY AREAS OF EARLY MATHEMATICS LEARNING



### Cardinality and Counting

Understanding that the cardinal value of a number refers to the quantity, or 'howmanyness' of things it represents



### Comparison

Understanding that comparing numbers involves knowing which numbers are worth more or less than each other



### Composition

Understanding that one number can be made up from (composed from) two or more smaller numbers



### Pattern



### Shape and Space



### Measures

When  
does it  
start?



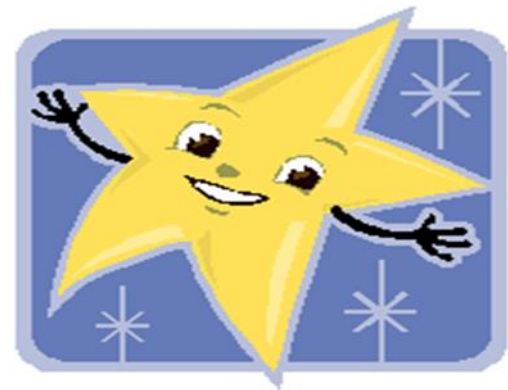
**So what is counting?**

**Recitation and Enumeration**

# Twinkle Twinkle Counting

The new number names are: Twinkle, little, how, wonder...

- Count with me
- Can you count by yourself
- Can you count from **how** to **the**
- Can you count back from **up**
- Can you count in **littles**



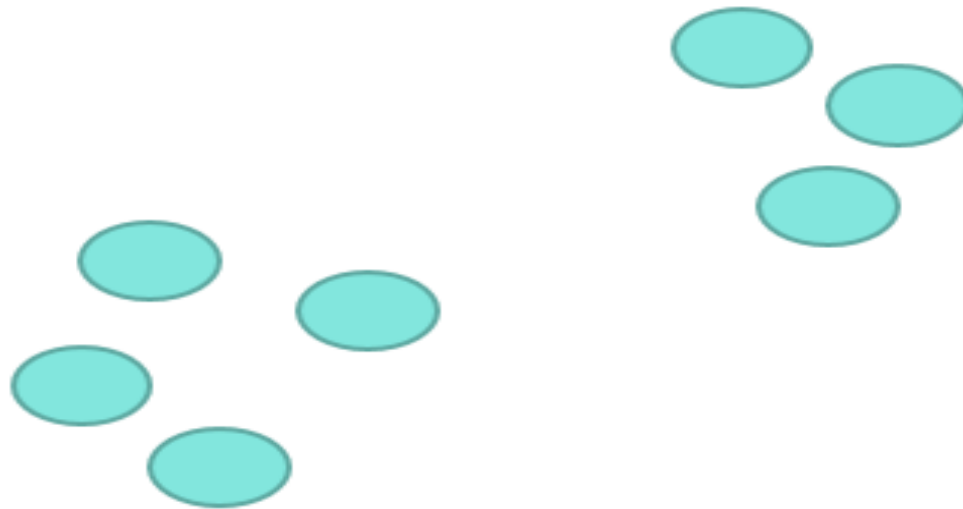
# Subitising



*Instantly recognizing the number of objects in a small group, without counting.*











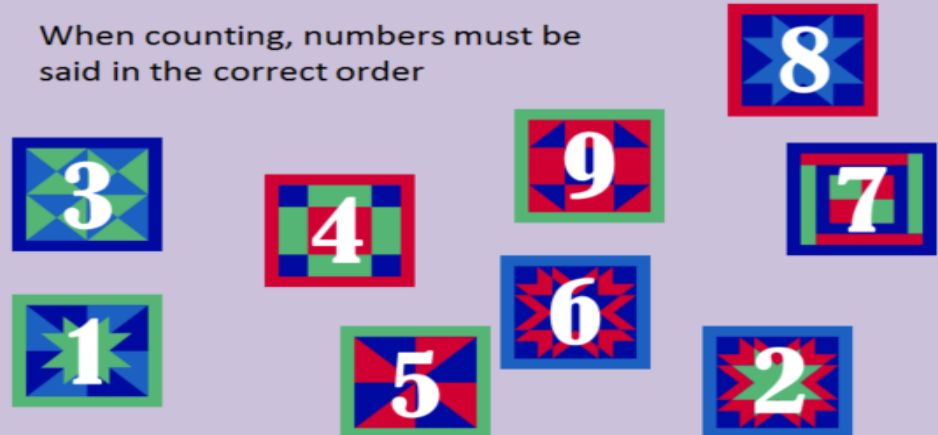
## One-to-one principle

Each counting word (number) matches an object



## Stable order principle

When counting, numbers must be said in the correct order



## Cardinal Principle

The last number you say is the cardinal value,  
(total)



I have 5 bears

## Abstraction principle

- Mixed sets – what is countable.

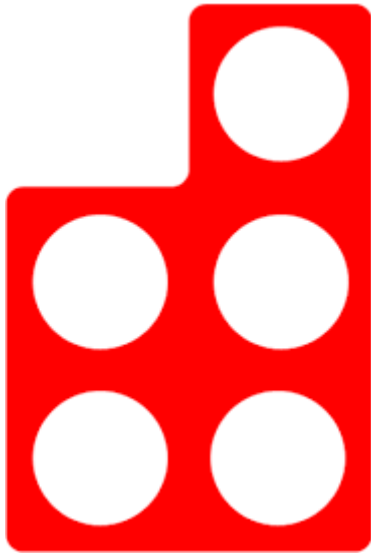


## Order Irrelevance

It doesn't matter in which order you count objects.



# Fiveness of 5



# Activities and opportunities:





# Maths Through Stories

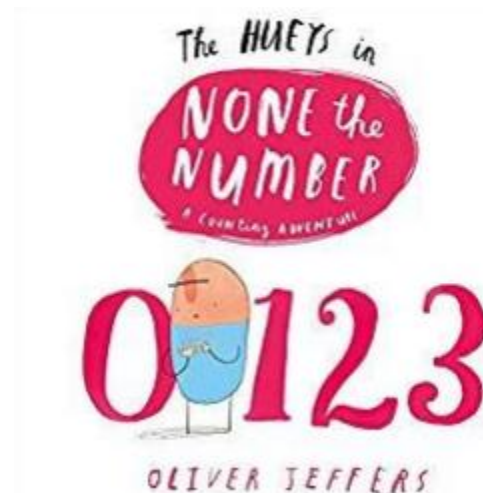
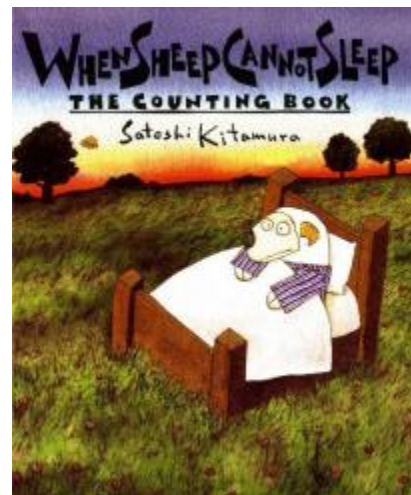
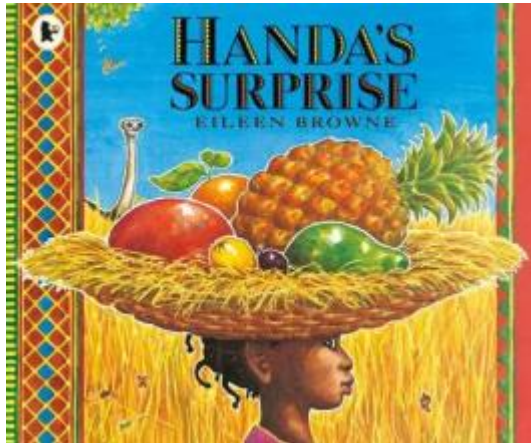
Picture books provide meaningful opportunities in teaching key mathematical skills and concepts.

Provide a context in which to learn maths and children perform better on tasks which are embedded and suggest rich possibilities for investigation and encourage the children's own mathematical thinking.

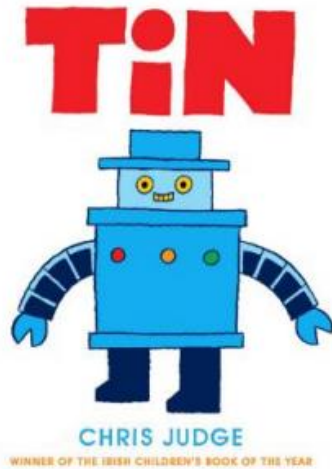
High quality picture books develop positive attitudes to taking risks and trying out new ideas.

They offer valuable language models and extend children's vocabulary.

# Maths Through Stories



# Maths is everywhere!



How many windows are there in this building? How do you know?

What shapes can you see in the picture?



What is above the Ferris wheel? What is next to the balloon?

How many orange robots are there? Are there more orange robots or green robots?

# How can you help at Home?

Pairing socks together.  
How many socks?  
How many pairs?

Counting stairs as they climb,  
when you lay the table and  
when they have a snack.  
How many breadsticks have you got?

Counting when you walk .  
How many blue cars?  
How many wheels?  
Swings in the park  
Birds in the tree.  
Let's pick up 6 leaves



Sing number rhymes  
together.  
10 in the bed...  
12345, once I caught a  
fish alive.

Go shopping together  
We need 4 apples  
Let's get 3 more. How  
many do we have  
altogether?

Through play. Count the cars...  
How many pieces of puzzle  
are missing?  
Can we make 5 cakes using the  
playdough?



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# Maths in KS1

# Key Aims of the Maths National Curriculum

Fluent recall of mental maths facts e.g. times tables, number bonds.

To reason mathematically – children need to be able to explain the mathematical concepts with number sense; they must explain how they got the answer and why they are correct.

Problem solving – applying their skills to real-life contexts.

# Multiplication

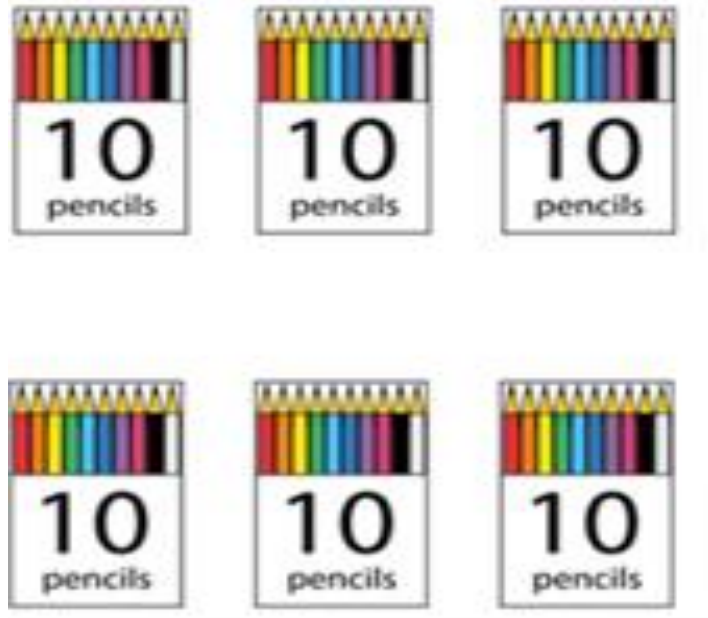
## Year One

- Recognising and making equal groups
- Repeated Addition
- Using arrays
- Making doubles
- Count in 2s, 5s and 10s

## Year Two

- Recognising and making equal groups
- Using arrays
- Making doubles
- 2x, 3x, 5x and 10x table

# Repeated Addition



$$10 + 10 + 10 + 10 + 10 + 10 = 60$$



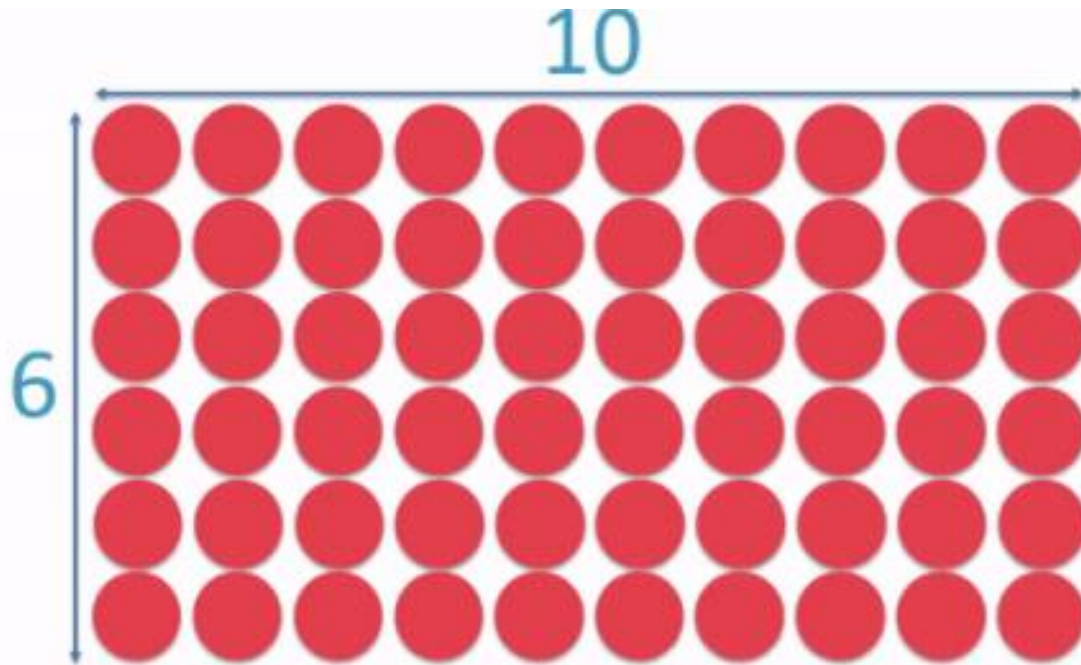
## Repeated Addition task

Use the resources on your table to represent **20** as repeated addition.

**Challenge**: How many ways can you find of representing **20**? How can you prove that you've found them all?

Now explain how you made 50 with another person who used a different resource.

# Arrays



$$6 \times 10 = 60$$

## Arrays task: Taking learning outside

Use objects found in the outside area to create an array.

**Challenge**: Can you write on your whiteboard the array your friend has made?  
Can they do the same for your arrays?

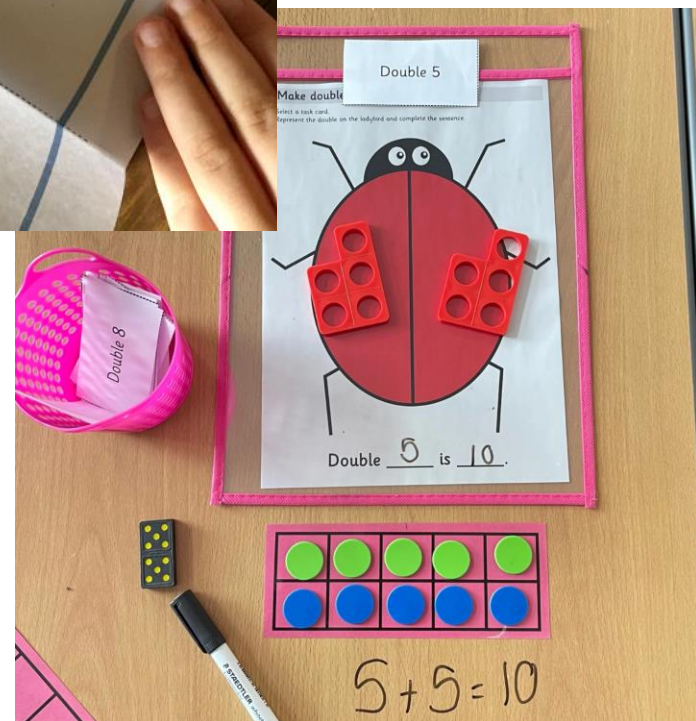
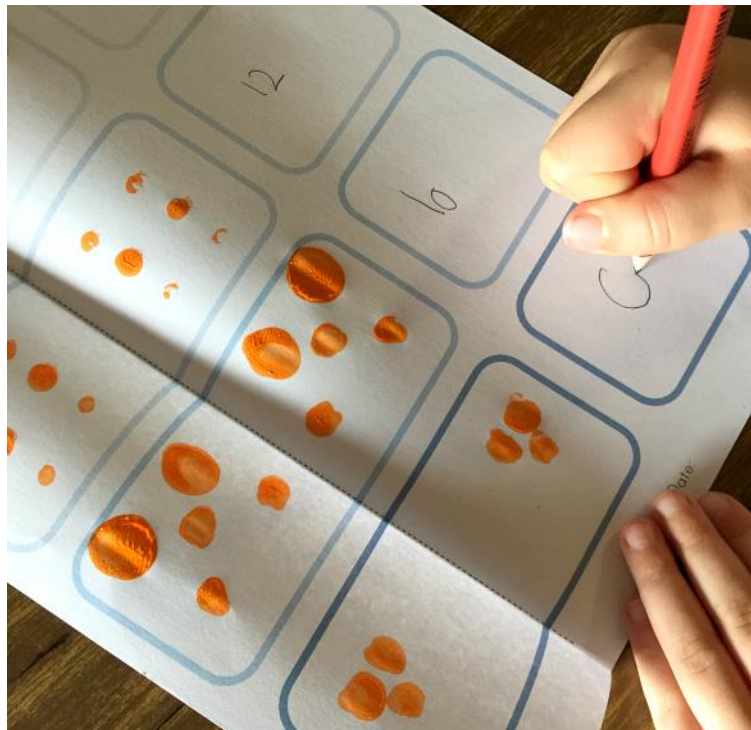
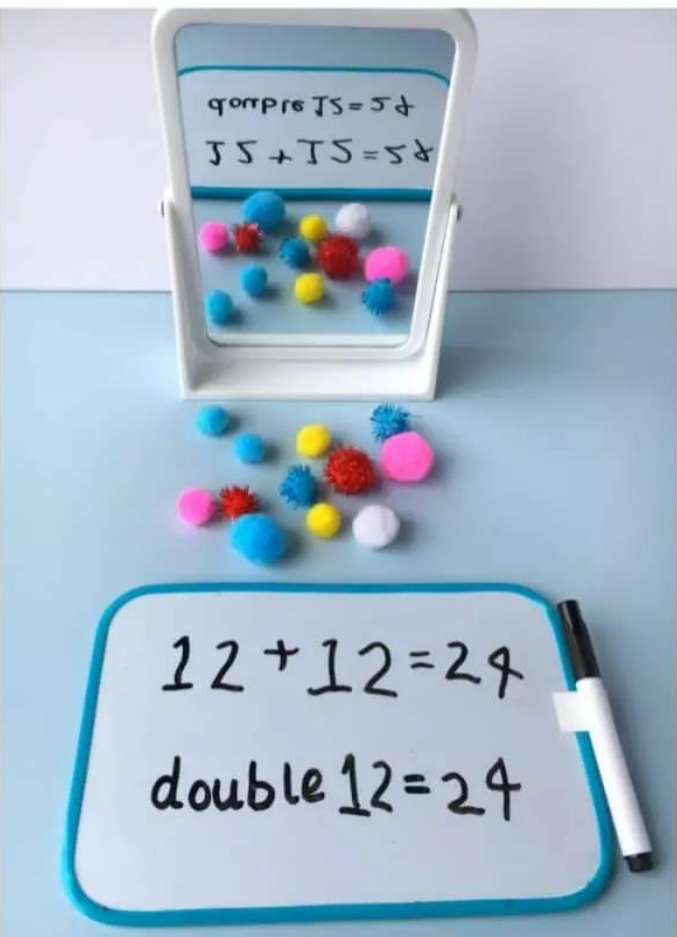


# Arrays Mastery Task

Draw two arrays to represent the flowers shown below:



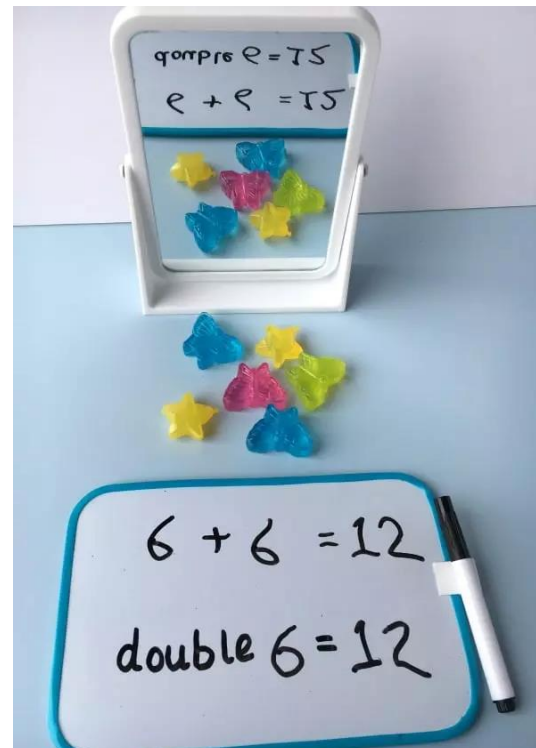
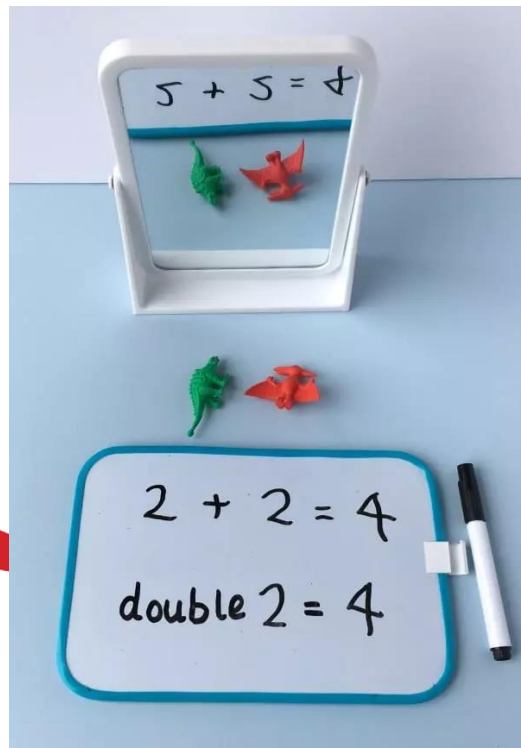
# Doubles



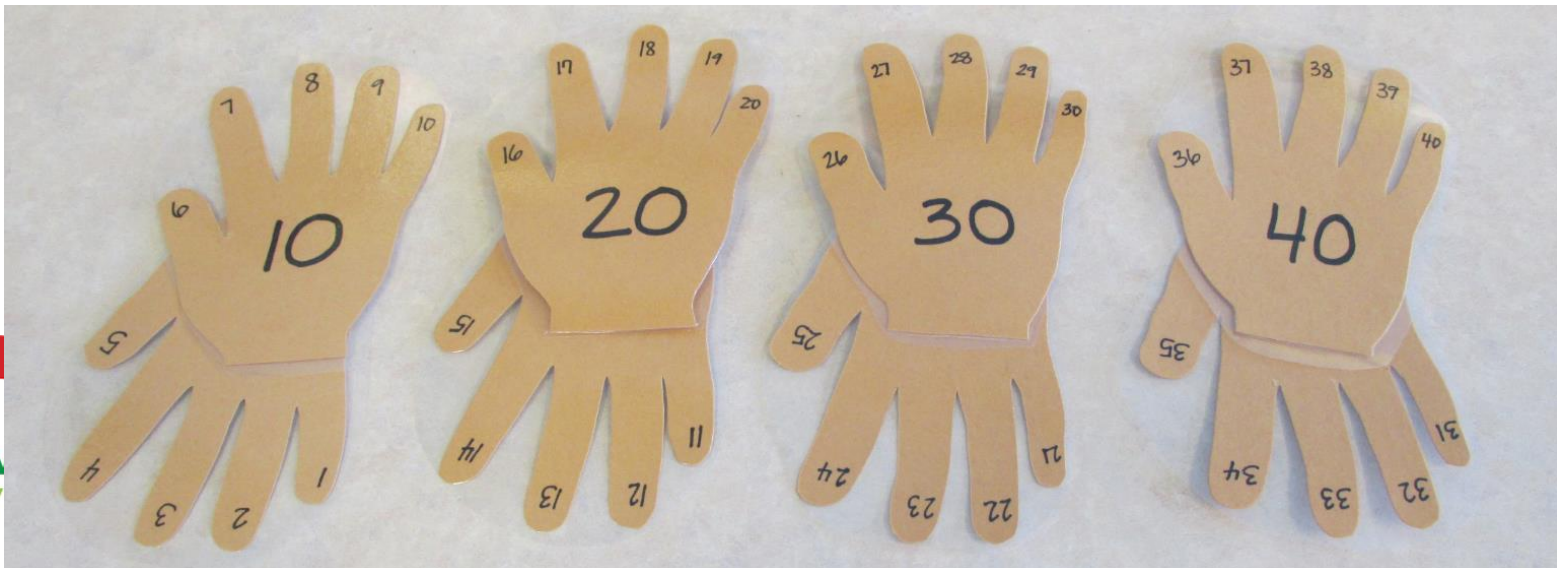
## Doubles task: Mirror image

Use the mirrors provided to create a double.  
Write your number sentence on a whiteboard.

**Challenge**: Can you write your number sentence in words?



# Counting in 2's, 5's and 10's



## Counting in 2's task: Shoes and socks!

Take your shoes off and line them up in a row.

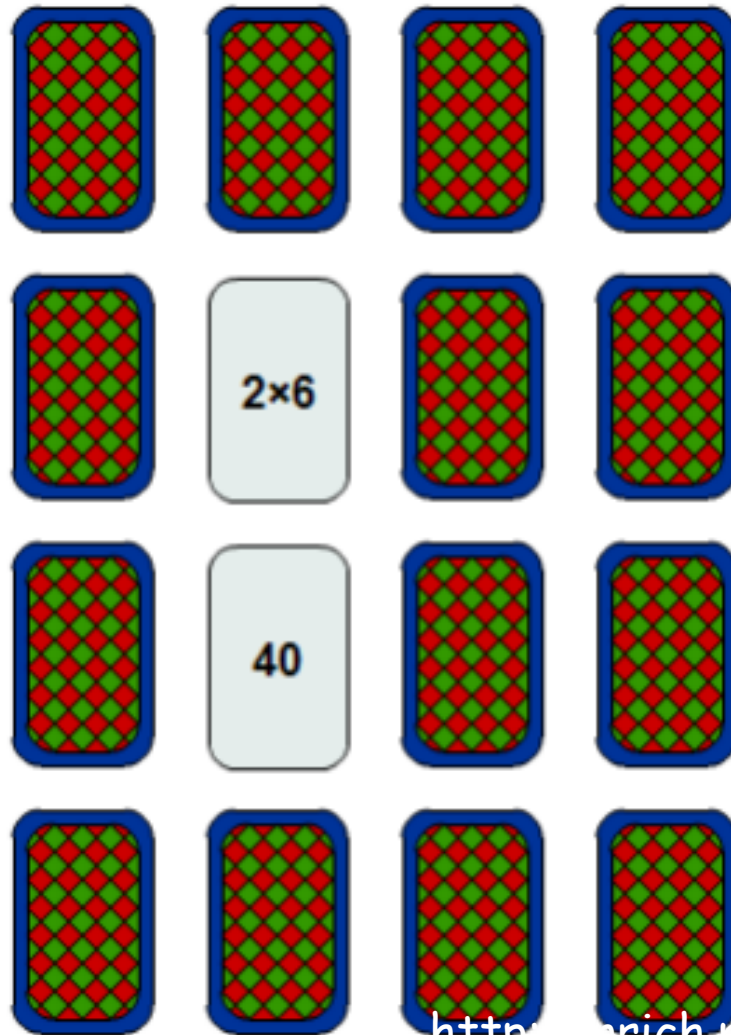
Can you count in 2?

If you run out of shoes you could always use your socks!





# Times Tables- Matching Card Game



# Race Track

With a partner have a go at this game:

2	12	8	16	4	24	14	22	6	20	10	18



# Reasoning and Problem Solving with Multiplication

Rosie counts back from 50 in 2s.

Amir counts up from 12 in 2s.



50, 48, 46, 44...

12, 14, 16...



They say their numbers together.  
Who will say 30 first.

Year One

Eva says,



Every number in the  
2 times-table is even.

Is she correct? Explain your answer.

Year  
Two

# Division

## Year One

Odd and even numbers

Making equal groups- sharing

Making equal groups- grouping

## Year Two

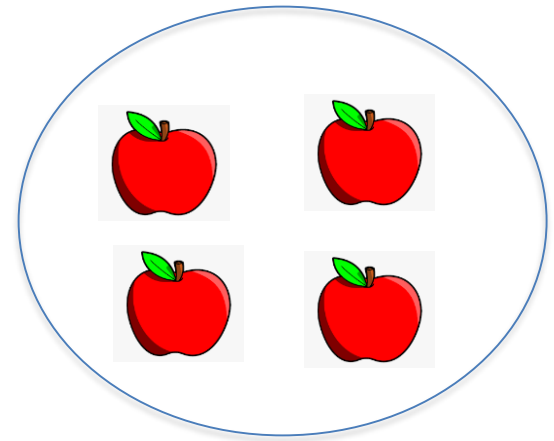
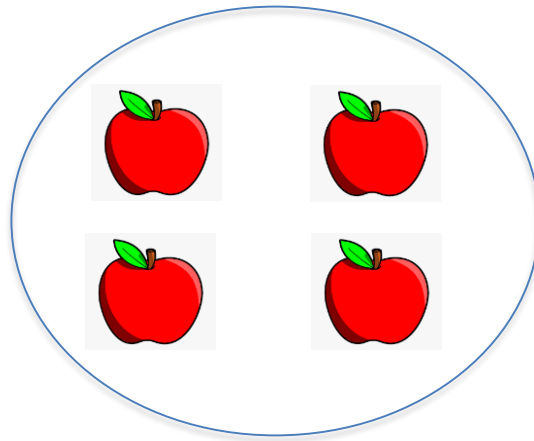
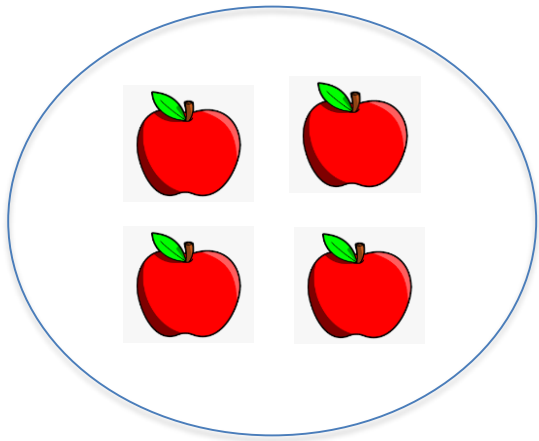
Odd and even numbers

Making equal groups- sharing

Making equal groups- grouping

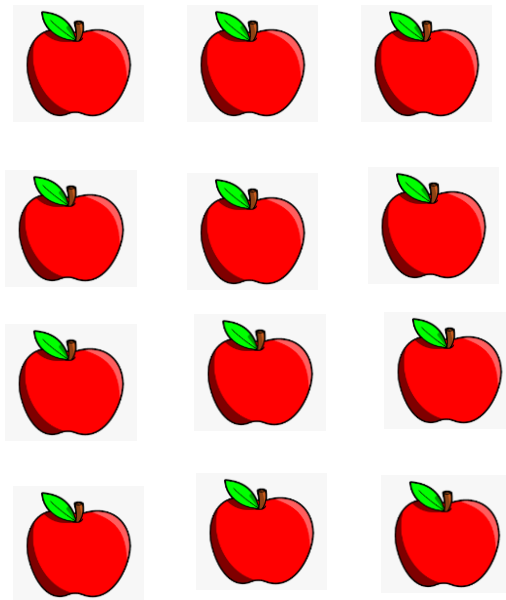
Divide by 2, 5 and 10

# Making Equal Groups- Sharing



12 divided by 3

# Making Equal Groups- Grouping

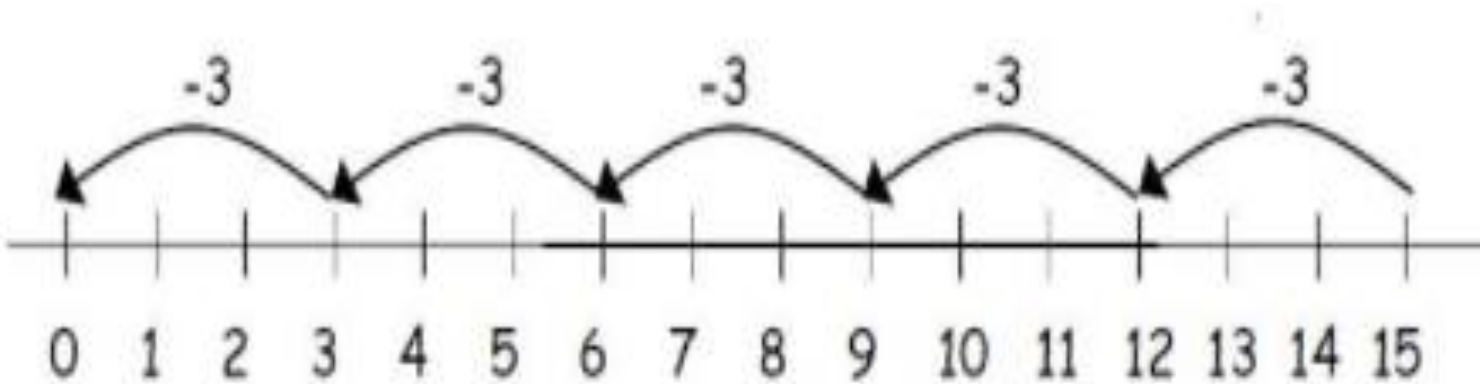


12 divided by 3

# Division on a Numberline

## Repeated Subtraction

15 divided by 3



## Division task

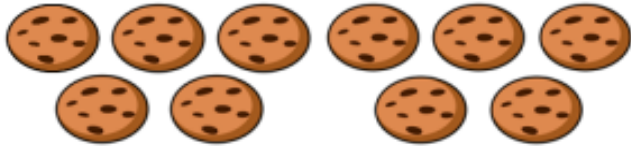
Use the resources on your table to represent 20 divided by 5.

**Challenge**: How many ways can you group 20 equally?



# Reasoning and Problem Solving with Division

Dora has 10 biscuits.



She wants to share them equally at her party.

How many people could be at the party?

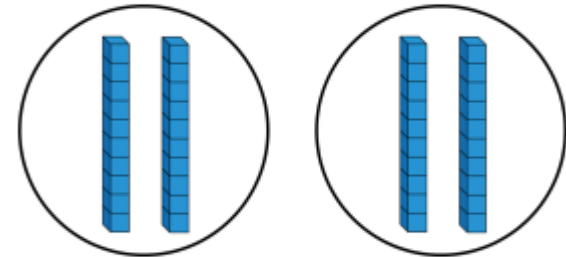
Year  
One

Jack says,



I can work out  $40 \div 2$  easily because I know that 40 is the same as 4 tens.

This is what he does:



$$40 \div 2 = 20$$

Is it possible to work out  $60 \div 3$  in the same way?

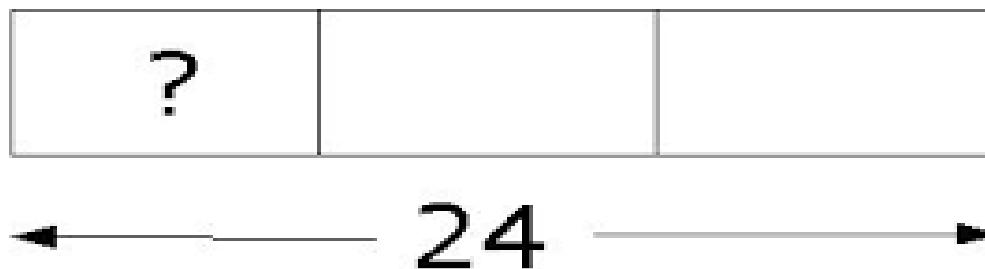
Prove it.

Is it possible to work out  $60 \div 4$ ?

What is different about this calculation?

Year  
Two

# Bar Modelling



$$24 \div 3 = ?$$

# Fractions

## Year One

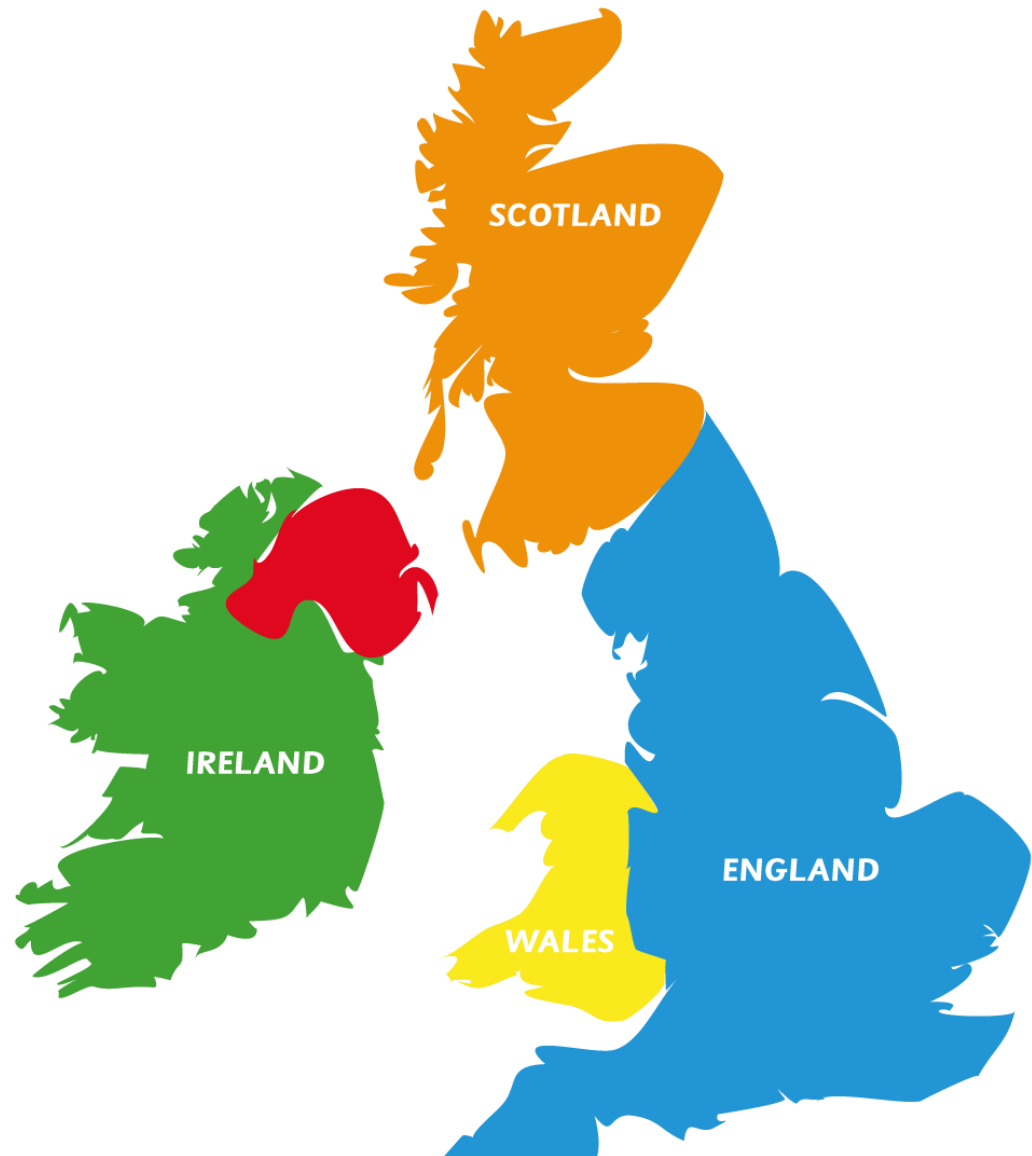
- Find a half
- Find a quarter

## Year Two

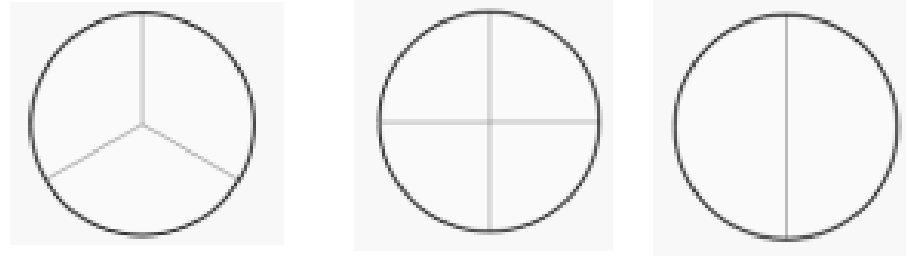
- Recognise and find a half
- Recognise and find a quarter
- Recognise and find a third
- Unit fractions and non- unit fractions
- Equivalent fractions
- Find three quarters

# Recognising Equal Groups

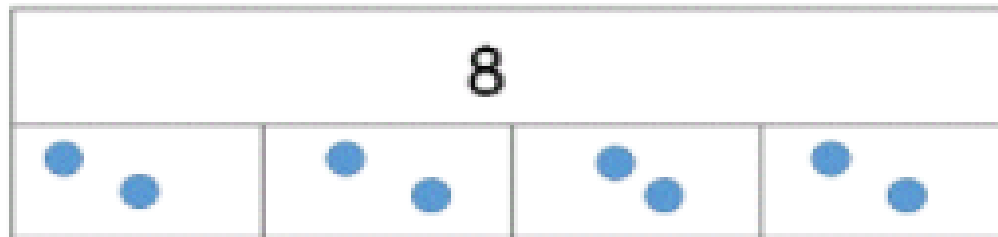
The UK is the whole  
and Scotland is a part  
of it.



# Finding a Fraction of a Shape



# Finding a Fraction of a Number



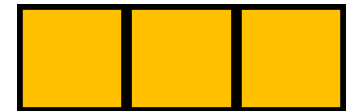
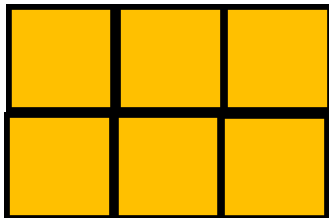
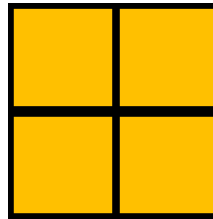


Can the counters be split into 4 equal groups?

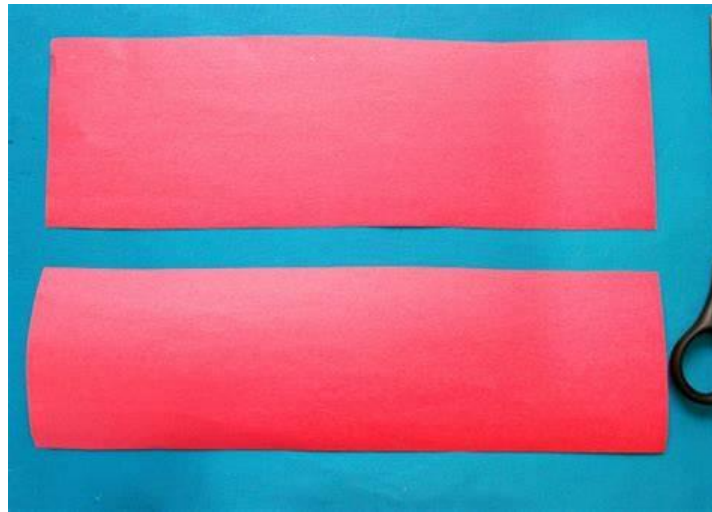
How many counters will each child get?

Here is a  $\frac{1}{4}$  of a shape 

Which shape does it belong to?



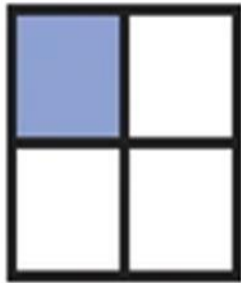
Is  $\frac{1}{4}$  bigger than  $\frac{1}{2}$  because 4 is bigger than 2?



What do you think? Explain your reasoning.



# Unit Fractions and Non- Unit Fractions



$$\frac{1}{4}$$



$$\frac{1}{8}$$



$$\frac{1}{3}$$

# Equivalent Fractions

