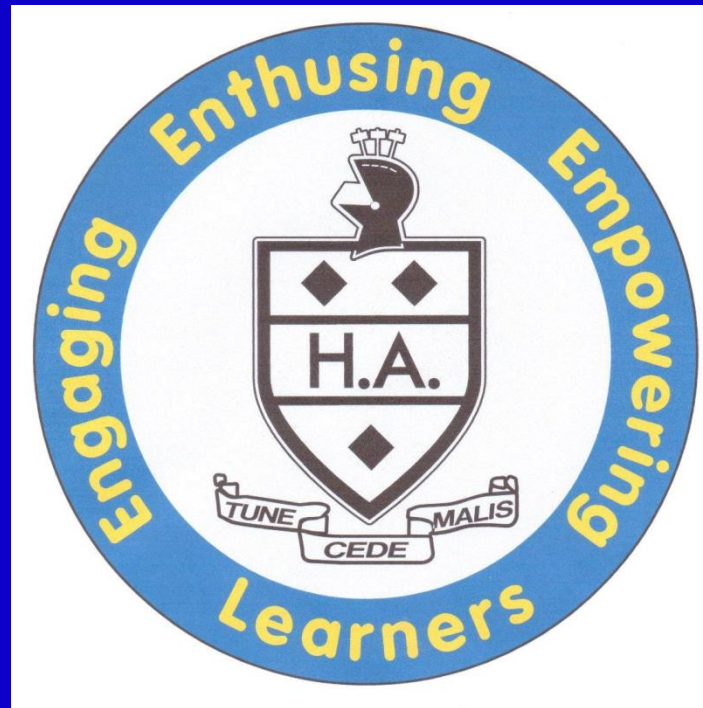
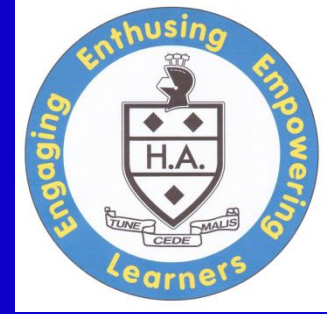


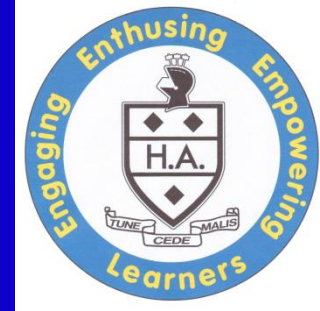
Highnam Academy  
Infant Maths  
Curriculum Evening  
19<sup>th</sup> October



# Aims of the Session



- Share the expectations of the maths curriculum.
- Show strategies used in maths lessons, particularly with number.
- Look at ways to support children with their maths at home.

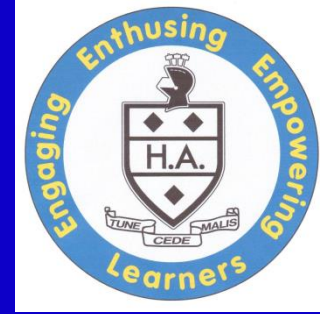


# The Maths Curriculum

Children should:

- Become **fluent** in the fundamentals of mathematics, so that they develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- **Reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations and developing an argument, justification or proof using mathematical language.
- **Solve problems** by applying their mathematics to a variety of problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

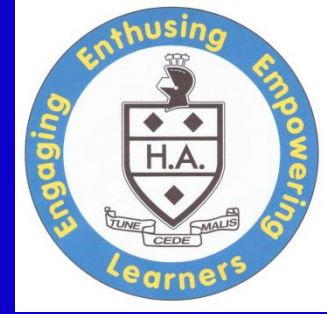
# Maths in Reception



Children should:

- Learn to count reliably with numbers to 20, place them in order and say which number is one more or one less than a given number.
- Use quantities and objects to add and subtract two single-digit numbers and count on or back to find the answer.
- Solve problems, including doubling and halving and sharing.
- Use everyday language to talk about measure (e.g. size, weight, time, money) and compare quantities and objects.
- Recognise, create and describe patterns.
- Explore characteristics of shapes and use mathematical language to describe them.

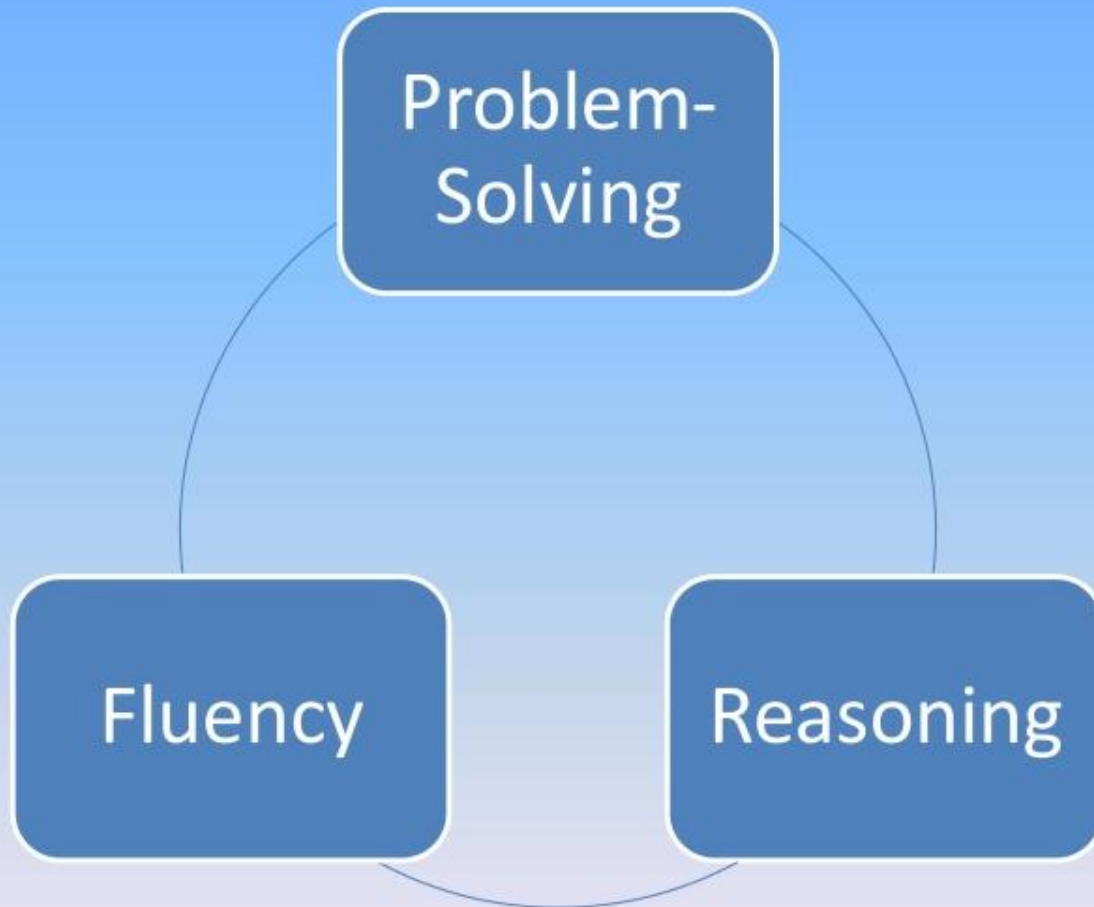
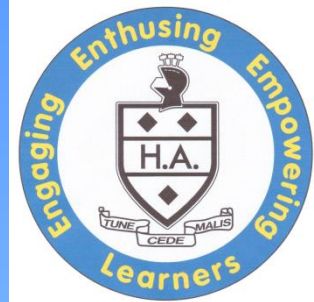
# Maths in KS1

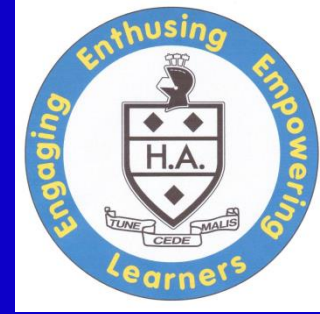


Programmes of study:

- Number and place value
- Addition and subtraction
- Multiplication and division
- Fractions
- Measurement (length, weight, capacity, temperature, time, money)
- Geometry – shape
- Geometry – position and direction
- Statistics (Y2 only)

# The Maths Curriculum





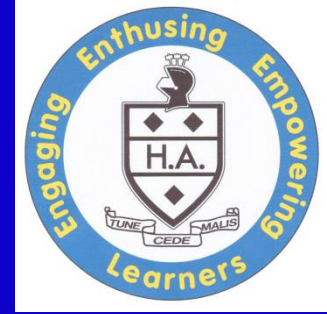
# Fluency – why is it important?

- Having a grasp of the fundamentals
- Integral aspect of problem-solving and reasoning
- Needs to be explicitly taught and developed over time
- Allows children to work quickly and accurately

I already know... so...

This is always true because...

I know this is false because...



# Examples of fluency

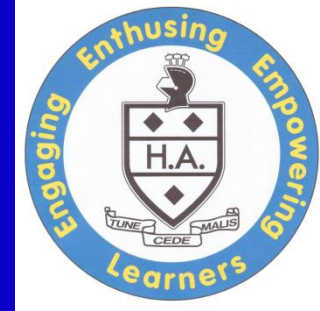
2 4 6 ? ?

$$7 + \square = 10$$

$$\square - 9 = 3$$



Once children develop fluency  
in maths they can make links



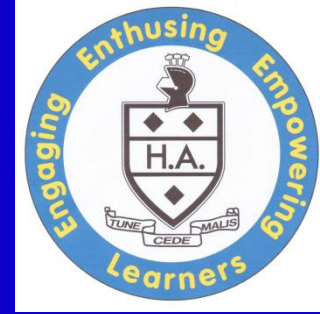
$$4 + 5 = 9$$

$$5 + 4 = 9$$

What are  
the links  
between 4, 5  
and 9?

$$9 - 5 = 4$$

$$9 - 4 = 5$$



# Reasoning and problem solving

Problem solving is finding an effective solution to reach an answer and breaks down problems into a series of manageable steps.

Reasoning is more open-ended. It is examining if the final solution is logical and practical and explaining why an answer is right or wrong.

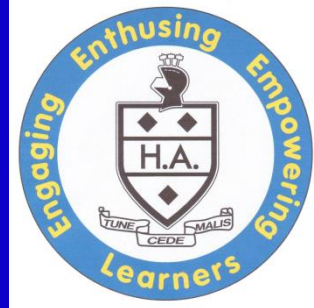
Joel thinks that:



$$40 + 2 = 402$$

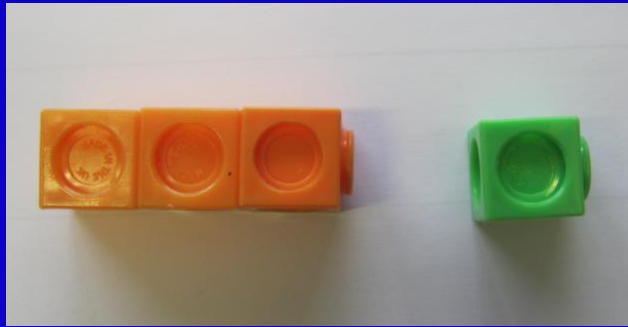
Explain the mistake he has made.

# Reasoning and problem solving

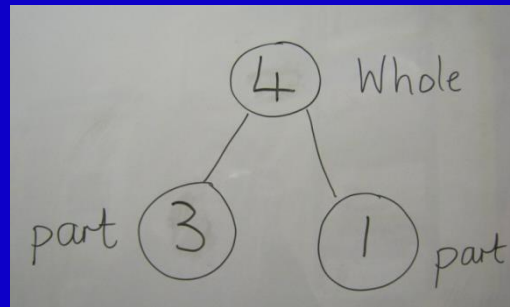


Noah watched the animals going into the ark.  
He was counting and by noon he got to 12, but he was only counting the legs of the animals.  
How many creatures did he see?  
Could there be more than one answer?

## Concrete



## Pictorial

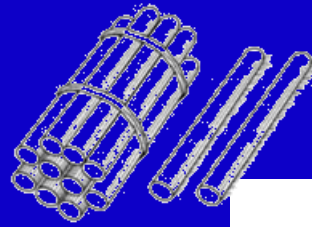
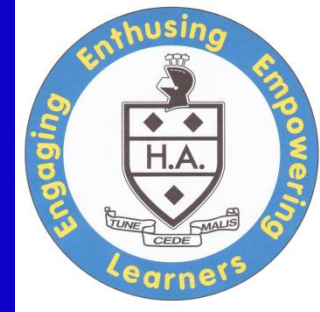


## Abstract

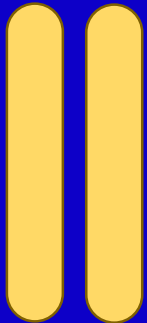
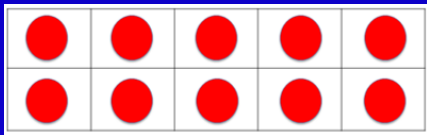
$$3 + 1 = 4$$

Concrete or pictorial representations support children to understand abstract concepts

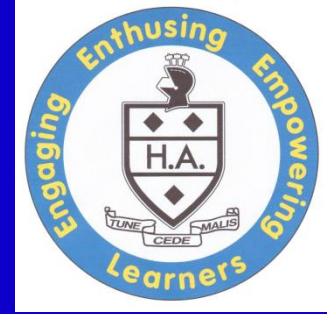
# A range of resources



100	10	1



# End of Key Stage One



Children are assessed during the summer term of Year Two.

They complete two maths papers:

- arithmetic
- reasoning and problem solving





$$\boxed{3} + \boxed{7} = \boxed{10}$$

$$\boxed{33} + \boxed{\phantom{00}} = \boxed{40}$$

$$\boxed{\phantom{00}} + \boxed{7} = \boxed{80}$$

There are **76** cars in the car park.

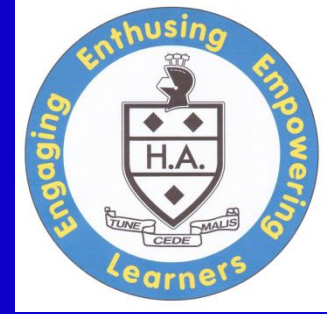
**18** more cars go into the car park.

Then **35** cars go out.

How many cars are in the car park **now**?

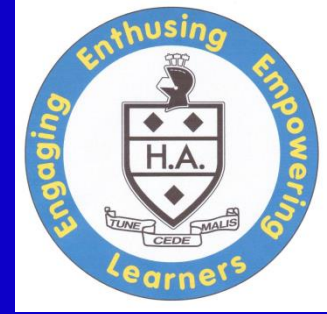


# Characteristics of a child who is good at maths



A child who:

- takes risks
- isn't afraid of getting it wrong
- asks questions and explores alternative solutions
- applies their mathematical understanding to solve problems
- is able to explain their thinking and how they've gone about solving a problem
- becomes a fluent and flexible thinker who is able to see and make connections



# Time to visit classes

Reception – Miss  
Cooney's class

Key Stage 1 – Y1 class  
with Mrs Trotman and  
Miss Spry