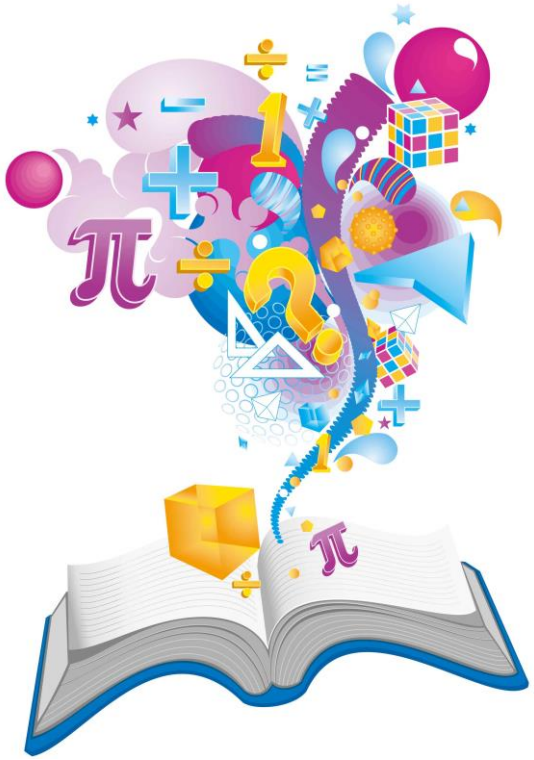
# Maths Parent Workshop



Lower Key Stage 2

# What does a maths lesson look like?

- **Starter** – The children will be given an engaging activity to do with an area for development.
- **Present** – The children will then explore the day's learning in a range of ways that rely heavily on children's involvement and use of mathematical verbal reasoning. The teacher will model the new learning and the children will have a change to practice it with support.
- **Apply** – the children will then work through a range of tasks independently, moving from fluency tasks to reasoning and problem-solving tasks.
- **Review** – The children will be given opportunity to review the learning, usually applying it to a problem or in a task that requires them to give a detailed explanation.

# Aim of the session

- To explain what the National Expectations are for your child by the end of Year 3
- To give you ideas and ways to support your child at home.
- To understand how the four operations are taught in Year 3
- To understand how you can support your child with their maths homework

# Addition and Subtraction

- To recognise the place value of each digit in a three-digit number (100s, 10s, and 1s)
- Know and use number bonds to 100 and 1000
- Estimate and use inverse operations to check answers to a calculation
- Solve two-step addition and subtraction problems

# Addition

Formal method using HTO

Carrying over

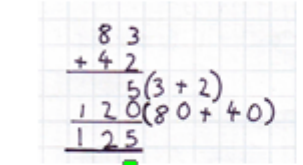
Carries over to the bottom

## Addition

**+ and = signs and missing numbers**

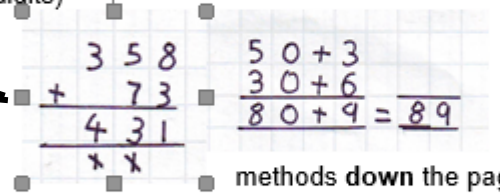
Partition into tens and ones and recombine
53 + 36= 89
(Begin to use numbers where the units exceed 10)

Add a near multiple of 10 to a two-digit number
Continue as in Year 2 but with appropriate numbers, e.g. 35 +19 is the same as 35 + 20 – 1




**Formal written methods introduced**
83 + 24 = 125

Children to work with HTU (3 digits)




Children to begin to use formal written methods **down** the page. Addition sign on the left of the problem. Add numbers with up to 3 digits, using formal written methods of column addition

Add numbers mentally, including: a three-digit number and 1s, a three-digit number and 10s, a three-digit number and 100s.

Estimate answers and use inverse operations to check answers

Solve problems, including missing number problems, using number facts, place value, and more complex addition.

+ and = signs and missing numbers
Continue using a range of equations as in Year 1 and 2 but with appropriate larger numbers.

Ken buys 3 large boxes and 2 small boxes of chocolates.

Each large box has 48 chocolates. Each small box has 24 chocolates.



How many **chocolates** did Ken buy altogether?

# Subtraction

Formal method using HTO

Exchanging
Starting from the Ones moving towards the Hundred

## Subtraction

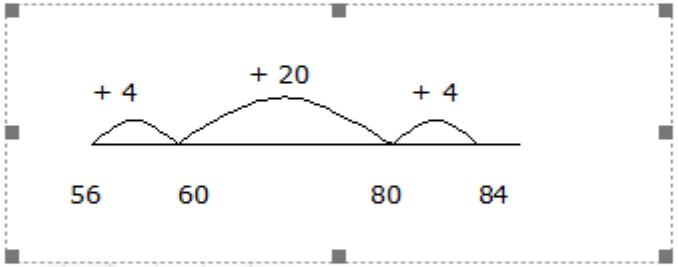
**- = signs and missing numbers**

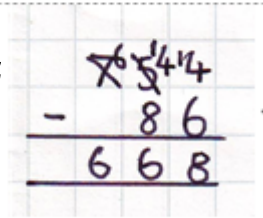
**Continue using a range of equations as in Year and 2 but with appropriate numbers.**

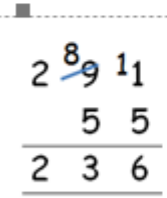
Find a small difference by counting up
**Continue as in Year 2 but with appropriate numbers**
**e.g. 102 – 97 = 5**

Subtract mentally a 'near multiple of 10' to or from a two-digit number
**Continue as in Year 2 but with appropriate numbers**
**e.g. 78 – 49 is the same as 78 – 50 + 1**

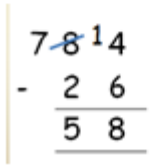
**Pencil and paper procedures**
Complementary addition
84 – 56 = 28



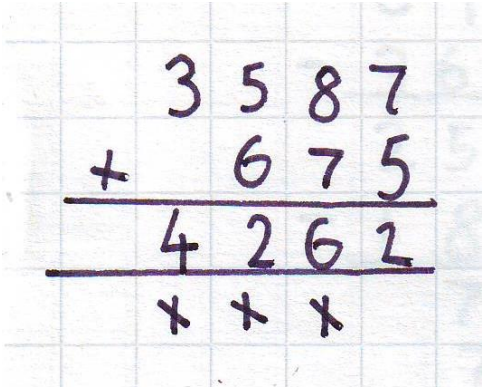

Consolidate number facts and calculation strategies from Year 3

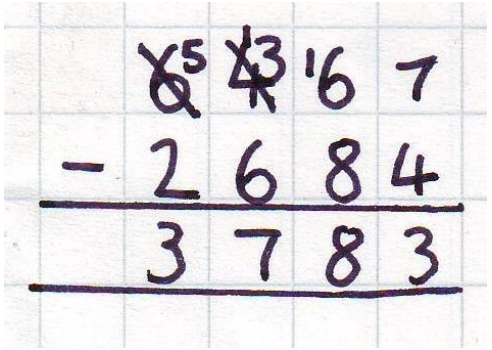



Children to begin to use formal written methods **down** the page Subtraction sign on the left of the problem

# Year 4
# Addition and Subtraction

- Column method
- Involves a very good knowledge of place value and number bonds to twenty
- Language for addition: carry over, sum of, altogether, more, total, plus, increase, together
- Language for subtraction: exchange (used to be known as “borrow”), difference, decrease, fewer, between, reduce, minus, take
- Same for both whole and decimal numbers



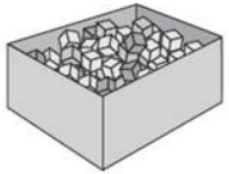



$5{,}813 + 1{,}359 =$

Seb has a box of **120** cubes.

He uses some of the cubes to build a tower.

**77** cubes are left over.



How many cubes has he used?

1 ma

Seb has **77** cubes left over.

He builds two more towers.

One tower uses **18** cubes and the other uses **35** cubes.

How many of his **77** cubes has he got left now?

Show

$7{,}064 - 502 =$

A bottle contains 568 millilitres of milk.

Jack pours out **half a litre**.


How much milk is left?

A pack of paper has 150 sheets.

4 children each take 7 sheets.

How many sheets of paper are left in the packet?

Mina and Ben play a game.

Mina scores 70 points.

Ben scores 42 points.

How many **more** points does Mina score than Ben?

# Year 3 Multiplication

Arrays and repeated addition to continue to understand the link between multiplication and addition

Partitioning method

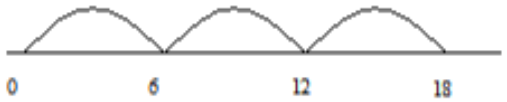
TO x O

Recombining

**x = signs and missing numbers**

Continue using a range of equations as in Year 2 but with appropriate numbers.

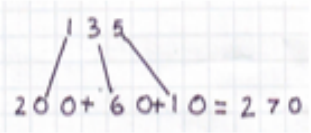
Number lines
6 x 3




Arrays and repeated addition
Continue to understand multiplication as repeated addition and continue to use arrays (as in Year 2).

Doubling multiples of 5 up to 50
35 x 2 = 70

Doubling three digit numbers and multiples of 5, 10 and 100



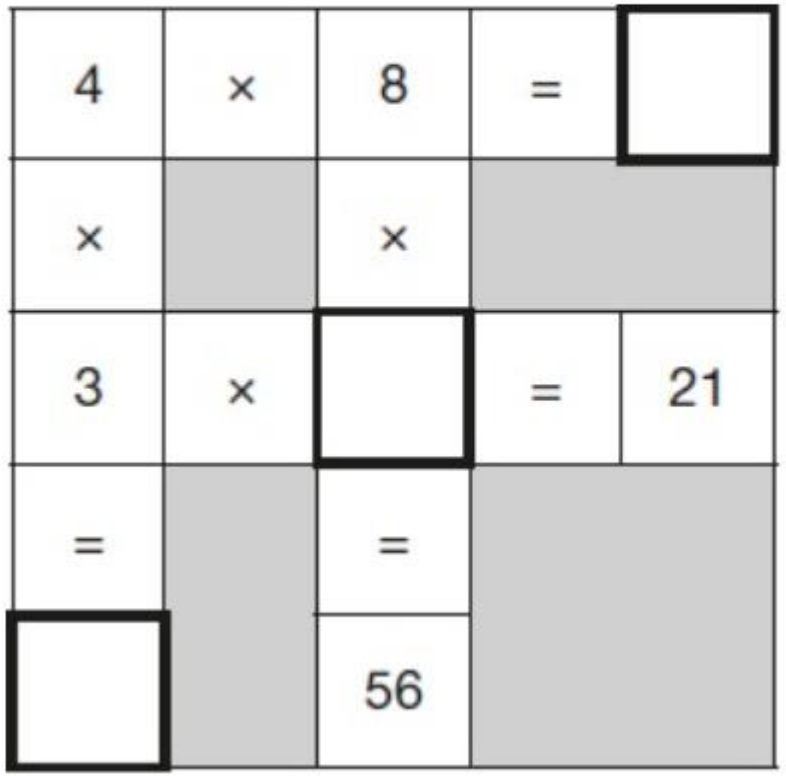

**Partition**
35 x 2 = 70

30 x 2 = 60
5 x 2 = 10

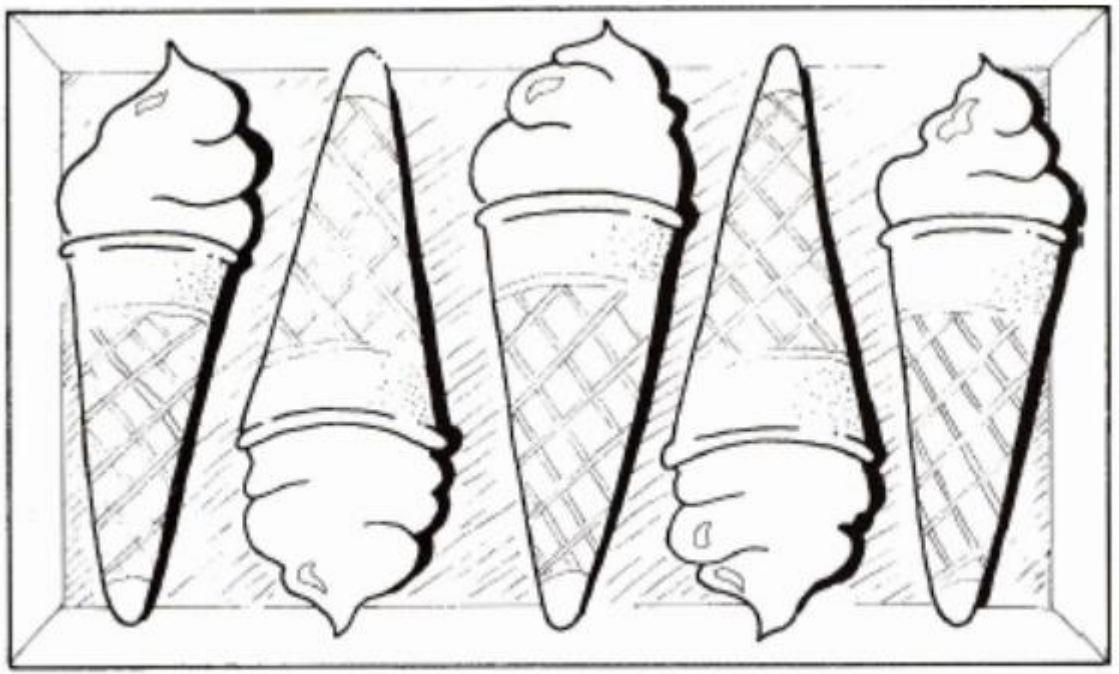
60
+10
70

In this grid, there are four multiplications.

Write the **three** missing numbers.



There are 5 ice-creams in a box.



Alex buys 7 boxes of ice-creams.

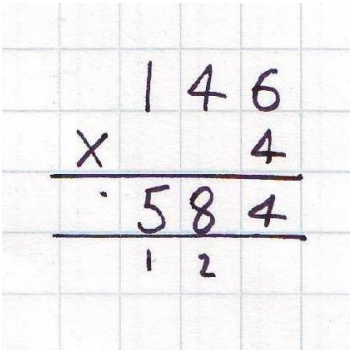
How many ice-creams does she buy altogether?

# Year 4
# Multiplication

- Long Multiplication moving onto short multiplication
- Involves an excellent knowledge of times tables and number bonds to 20 (not using fingers!)
- Language for multiplication: product, multiply, lots of, times, groups of
- Multiplication of decimals:
  - Still the same method
  - Teach them to “ignore” the decimal place and then include it at the end

```
  324
x   7
 2268
```

28 = 7 x 4
140 = 7 x 20
2100 = 7 x 300



Write the missing numbers.

150 − ☐ = 87

90 × ☐ = 450

3 pineapples cost the same as 2 mangoes.

One mango costs £1.35

How much does **one** pineapple cost?

Show your method

£

There are 28 pupils in a class.

The teacher has 8 litres of orange juice.

She pours 225 millilitres of orange juice for every pupil.

How much orange juice is left over?

Show your

# Year 3 Division

Understand division as sharing and grouping.

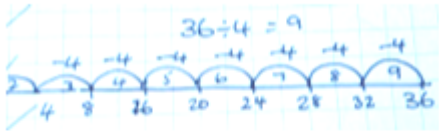
Use informal and written methods and formal method.

Solve problems, including missing number problems, involving division.

**÷ = signs and missing numbers**

Continue using a range of equations as in Year 2 but with appropriate numbers.

Understand division as sharing and grouping (repeated subtraction), eg 36 ÷ 4 = 9 can be modelled as: 36 can be shared between 4

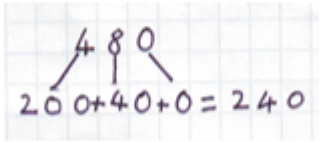



people, how many do they have each?

**** Equally the inverse can be taught where pupils jump up****

Grouping and remainders linked to times tables
How many 3's make 16? How many left over?
16 ÷ 3 = 5 r 1

Halving even numbers up to 100 and multiples of 10
Half of 480 = 240




Children to use informal written methods and formal written methods

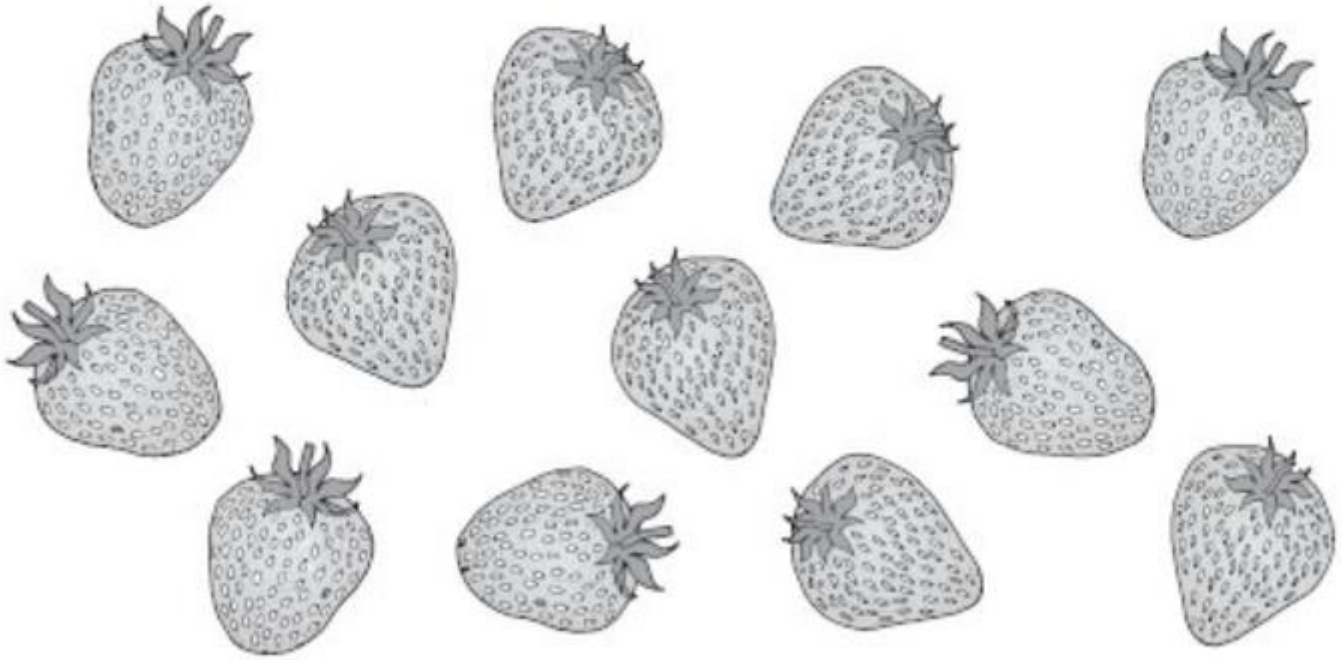
Divisibility rules – for the 2, 3, 4, 5, 8. 10 and 100 times tables.

Write and calculate mathematical statements for division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.

Solve problems, including missing number problems, involving division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.

Some children share 12 strawberries.

Each child gets 3 strawberries.



How many children are there?

Circle the **two** divisions which have an answer of **5 remainder 2**

**17 ÷ 5**

**17 ÷ 3**

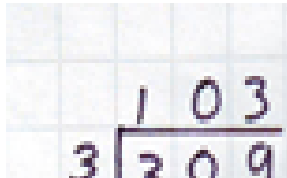
**22 ÷ 4**

**22 ÷ 5**

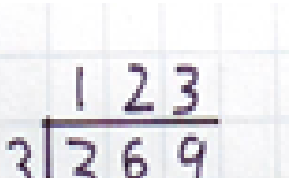
# Year 4
# Division

- “bus stop”
- Involves an excellent knowledge of times tables
- Language for division: share equally, divisible by, divided by, group
- “Remainders” to be presented as remainder, then fractions, then decimals
- Division of decimals:
  - Still the same method
  - Knowledge of place value

309 ÷ 3 = 103




369 ÷3 = 123



A group of friends earns £80 by washing cars.

They share the money **equally**.

They get £16 each.

How many friends are in the group?

1 mark

Write the correct sign =, > or < in each circle.

| | | |
|---|---|---|
| 9 × 3 | ○ | 8 × 4 |
| 9 − 3 | ○ | 8 − 4 |
| 9 + 3 | ○ | 8 + 4 |
| 9 ÷ 3 | ○ | 8 ÷ 4 |

# Year 4 Multiplication Check

- To check whether pupils can recall their times tables fluently, which is essential for future success in mathematics.
- Children in Year 4 will take the Multiplication Tables Check will take place during Monday 2nd June – Friday 13th June 2025.
- Further information for parents: Multiplication tables check: information for parents - GOV.UK (www.gov.uk)

# How to help at home

## Support weekly homework

www.ttrockstars.com
www.nrich.com
www.mathisfun.com