

# Calculation Methods

What should I expect my child to be doing in Year 1?

## Written methods:

### Addition

#### National Curriculum Expectations:

- Add and subtract one-digit and two-digit numbers to 20, including zero.
- Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.

#### Written Method:

1. Pictorial and physical handling of objects for addition.



2. Written number line – counting on in ones; counting on in larger steps.

### Subtraction

#### National Curriculum Expectations:

- add and subtract one-digit and two-digit numbers to 20, including zero
- read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs

#### Written Method:

1. Pictorial and physical handling of objects for subtraction.
2. Number line – counting back in ones and larger steps

### Multiplication

#### National Curriculum Expectations:

- *double numbers and quantities*
- *make connections between arrays and number patterns*

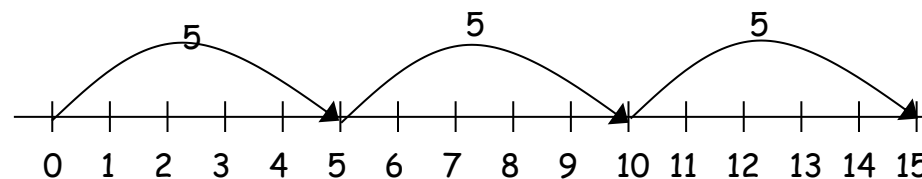
#### Written Method:

1. Number patterns

3 times 5 is  $5 + 5 + 5 = 15$  or 3 lots of 5 or  $5 \times 3$

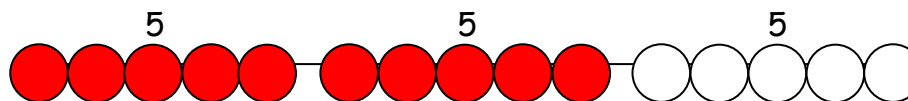
Repeated addition can be shown easily on a number line:

$$5 \times 3 = 5 + 5 + 5$$

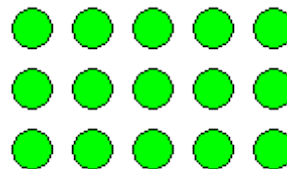


and on a bead bar:

$$5 \times 3 = 5 + 5 + 5$$



2. Link to visual arrays



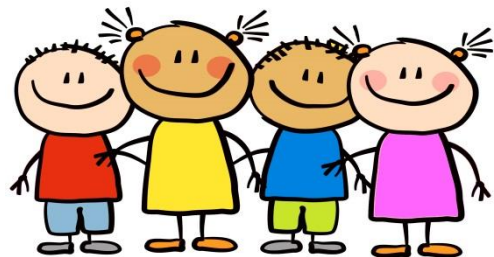
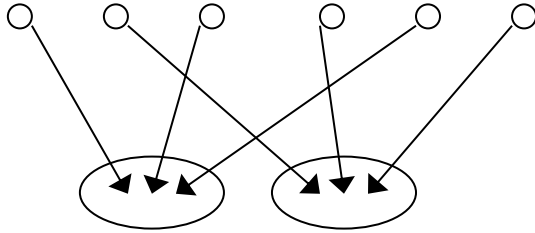
# Division

## National Curriculum Expectations:

- group and share small quantities
- half numbers and quantities
- make connections between arrays and number patterns

## Written Method:

1. Pictorial division to represent grouping and sharing



# Mental methods:

Alongside formal, written methods, our children will be equipped with a range of strategies to solve problems mentally. This table reflects the progression in the teaching and learning of mental methods of calculation in Key Stage 1. The majority of mental strategies will develop during numeracy lessons or guided numeracy sessions but discrete learning of mental methods may also be appropriate. Our children should look at a calculation and be able to say: **Can I work this out in my head? Do I need to use a written method? Do I need to use a calculator?**

	Addition	Subtraction	Multiplication	Division
YR	Add single digit numbers by counting on and counting back.		Double numbers up to 10.	Halving even numbers up to 10 or 20 with objects.
Y1	Add T U + U and one digit and two digit numbers up to 20, using counting on.	Subtract 1 digit and 2 digit numbers to 20 including zero by counting back.	Doubling and halving numbers.	Halving even numbers up to 20.
Y2	Add T U + U; T U + U; and any 2 two digit numbers using mental partitioning	Subtract T U - U, T U - T and any 2 x 2 digit numbers using counting down. 76-57 76-50 -7	- Recall & use x facts (2,5 & 10) - Read/connect 10 x table to place value 5 x table to clock face - Variety & Language - Doubling & halving 2 digit numbers - Recall & use x facts (3,4,6,8) - Commutatively & associativity:- 4 x 12 x 5 = 4 x 5 x 12 = 20 x 12 = 240	Deriving division facts from x tables eg 6 ÷ 3 = 2 (because 3 x 2 = 6). Fact Families. Halving numbers up to 50.

H = Hundreds

T = Tens

U = Units