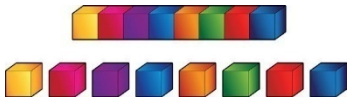
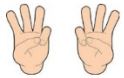
| EYFS | | | |
|---|---|---|---|
| In EYFS, Maths is taught in a way to provide children with a really deep understanding of early number, including the composition of numbers up to 20. | | | |
| **Counting** | **Addition** | **Subtraction** | **Multiplication &Division** |
| Children are encouraged to gain a sense of the numbers system through the use of counting concrete objects.<br>  <br>They count how many items are in a set, estimate how many there are, count matching one-to-one, subitise and understand teen numbers.<br>  <br>  | Children combine objects in practical ways and count all.<br>  <br>They understand addition as counting on using cubes, bead strings, number lines and their fingers.<br>  <br>They recognise number bonds.<br>They use their knowledge of the composition of numbers up to 10.<br>  <br>They use concrete and pictorial representation to record their calculations. They begin to use + and =. | Children understand subtraction as counting back using cubes, bead strings, number lines and their fingers.<br>  <br>They recognise number bonds.<br>They use their knowledge of the composition of numbers up to 10 and number bonds to support them with subtraction.<br>  <br>They use concrete and pictorial representation to record their calculations. They begin to use - and =. | Children begin to count in 2s, 5s and 10s.<br>They begin to double numbers to 5 using their fingers and halve even numbers to 10.<br>  <br>Division is introduced practically through sharing into halves and quarters.<br>  |

# Overview of Strategies and Methods – Addition

## Mental Addition

### Year 1

#### Using place value

Count in 1s

e.g. *45 + 1*

Count in 10s

e.g. *45 + 10 without counting on in 1s*

| | | |
|---|---|---|
| 34 | 35 | 36 |
| 44 |  | 46 |
| 54 | 55 | 56 |

Add 10 to any given 2-digit number

#### Counting on

Count on in 1s

e.g. *8 + 3 as 8, 9, 10, 11*


Add, putting the larger number first

Count on in 10s

e.g. *45 + 20 as 45, 55, 65*

### Year 2

#### Using place value

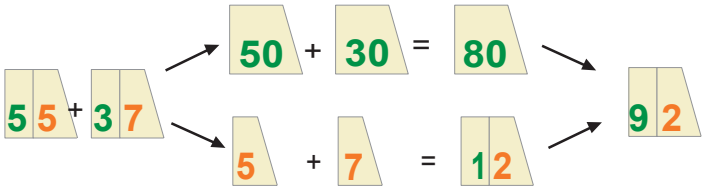
Know 1 more or 10 more than any number

e.g. *1 more than 67*

e.g. *10 more than 85*

Partitioning

e.g. *55 + 37 as 50 + 30 and 5 + 7, then finally combine the two totals: 80 + 12*



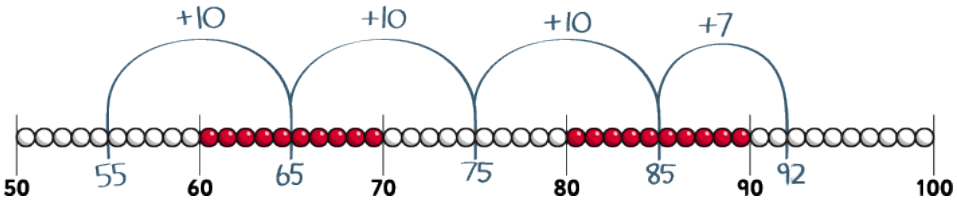

#### Counting on

Add 10 and multiples of 10 to a given 1- or 2-digit number

e.g. *76 + 20 as 76, 86, 96 or in one hop: 76 + 20 = 96*

Add two 2-digit numbers by counting on in 10s, then in 1s

e.g. *55 + 37 as 55 + 30 (85) + 7 = 92*




Add near multiples of 10

e.g. *46 + 19*

e.g. *63 + 21*

## Mental Addition

### Year 1

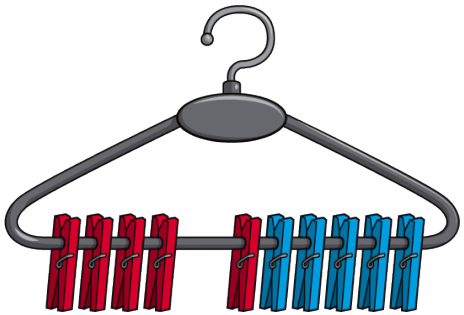
#### Using number facts

'Story' of 4, 5, 6, 7, 8 and 9

e.g. *7 = 7 + 0, 6 + 1, 5 + 2, 4 + 3*

Number bonds to 10

e.g. *5 + 5, 6 + 4, 7 + 3, 8 + 2, 9 + 1, 10 + 0*



*4 + 6 = 10*

Use patterns based on known facts when adding

e.g. *4 + 3 = 7 so we know 24 + 3, 44 + 3, 74 + 3*

### Year 2

#### Using number facts

Know pairs of numbers which make the numbers up to and including 12

e.g. *8 = 4 + 4, 3 + 5, 2 + 6, 1 + 7, 0 + 8*

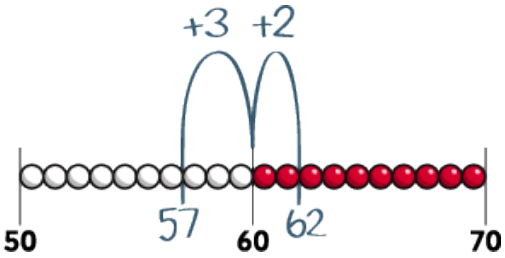
e.g. *10 = 5 + 5, 4 + 6, 3 + 7, 2 + 8, 1 + 9, 0 + 10*

Use patterns based on known facts when adding

e.g. *6 + 3 = 9, so we know 36 + 3 = 39, 66 + 3 = 69, 56 + 3 = 59*

Bridging 10

e.g. *57 + 5 = 57 + 3 (60) + 2 = 62*




Add three or more 1-digit numbers, spotting bonds to 10 or doubles

e.g. *3 + 5 + 3 = 6 + 5 = 11*

e.g. *8 + 2 + 4 = 10 + 4 = 14*

# Overview of Strategies and Methods – Subtraction

## Mental Subtraction

### Year 1

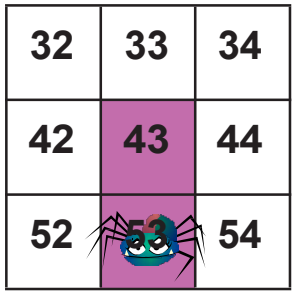
#### Using place value

Count back in 1s

e.g. *Know 53 – 1*

Count back in 10s

e.g. *Know 53 – 10 without counting back in 1s*

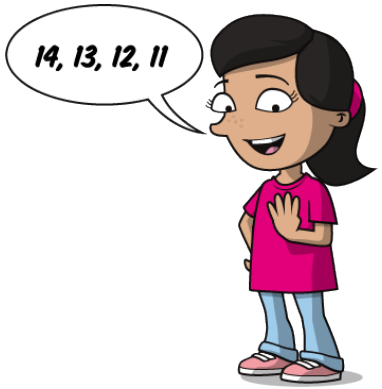



#### Taking away

Count back in 1s

e.g. *11 – 3 as 11, 10, 9, 8*

e.g. *14 – 3 as 14, 13, 12, 11*




Count back in 10s

e.g. *53 – 20 as 53, 43, 33*

### Year 2

#### Using place value

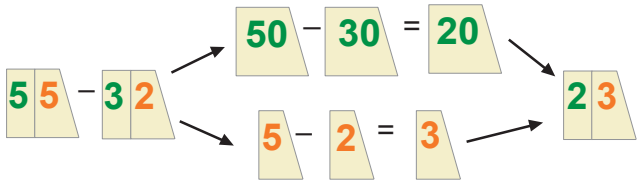
Know 1 less or 10 less than any number

e.g. *1 less than 74*

e.g. *10 less than 82*

Partitioning

e.g. *55 – 32 as 50 – 30 and 5 – 2 and combine the answers: 20 + 3*



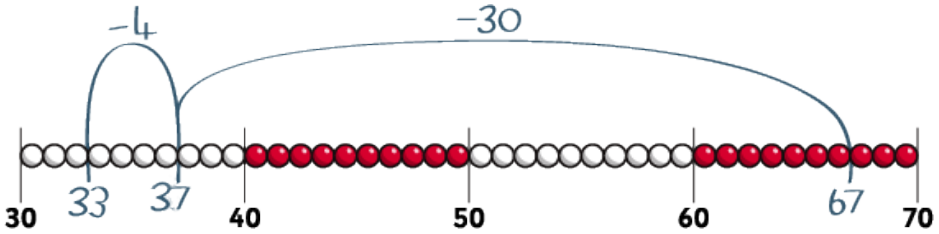

#### Taking away

Subtract 10 and multiples of 10

e.g. *76 – 20 as 76, 66, 56 or in one hop: 76 – 20 = 56*

Subtract two 2-digit numbers by counting back in 10s, then in 1s

e.g. *67 – 34 as 67 subtract 30 (37) then count back 4 (33)*




Subtract near multiples of 10

e.g. *74 – 21*

e.g. *57 – 19*

# Overview of Strategies and Methods – Subtraction

## Mental Subtraction

### Year 1

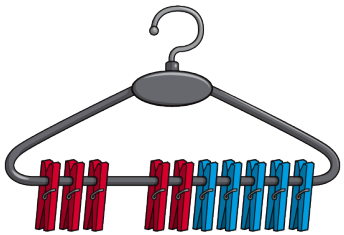
#### Using number facts

'Story' of 4, 5, 6, 7, 8 and 9

e.g. 'Story' of 7 is *7 – 1 = 6, 7 – 2 = 5, 7 – 3 = 4*

Number bonds to 10

e.g. *10 – 1 = 9, 10 – 2 = 8, 10 – 3 = 7*



*10 – 7 = 3*

Subtract using patterns of known facts

e.g. *7 – 3 = 4 so we know 27 – 3 = 24, 47 – 3 = 44, 77 – 3 = 74*

### Year 2

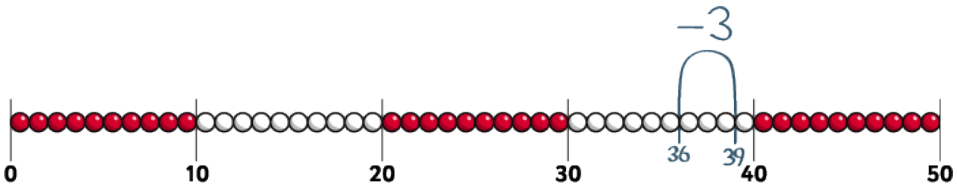
#### Using number facts

Know pairs of numbers which make the numbers up to and including 12 and derive related subtraction facts

e.g. *10 – 6 = 4, 8 – 3 = 5, 5 – 2 = 3*

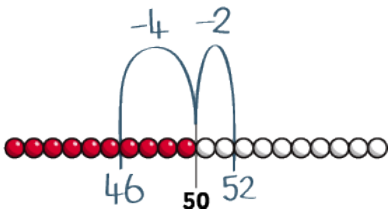
Subtract using patterns of known facts

e.g. *9 – 3 = 6, so we know 39 – 3 = 36, 69 – 3 = 66, 89 – 3 = 86*




Bridging 10

e.g. *52 – 6 as 52 – 2 (50) – 4 = 46*




#### Counting up

Find a difference between two numbers on a line where the numbers are close together

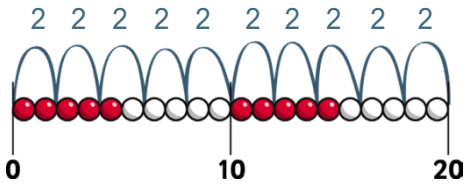
e.g. *51 – 47*

Mental Multiplication

## Year 1

### Counting in steps ('clever' counting)

Count in 2s



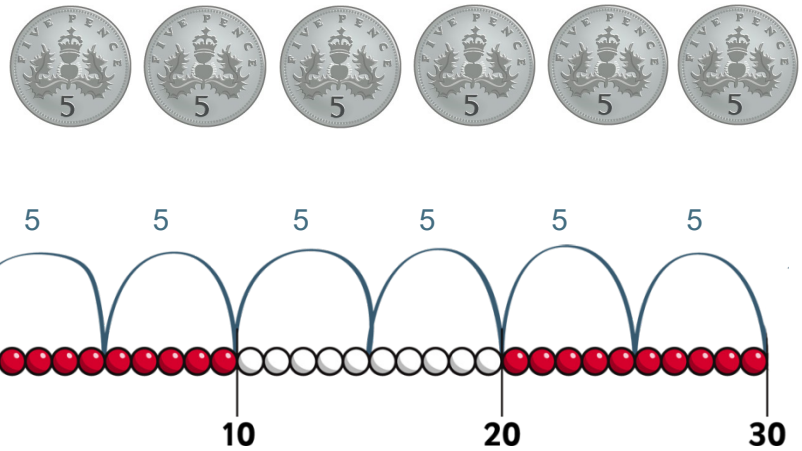

Count in 10s

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

## Year 2

### Counting in steps ('clever' counting)

Count in 2s, 5s and 10s

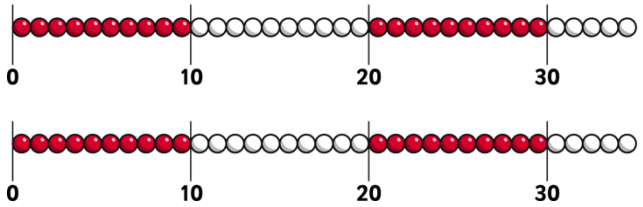



Begin to count in 3s

### Doubling and halving

Begin to know doubles of multiples of 5 to 100

e.g. *double 35 is 70*




Begin to double 2-digit numbers less than 50 with 1s digits of 1, 2, 3, 4 or 5

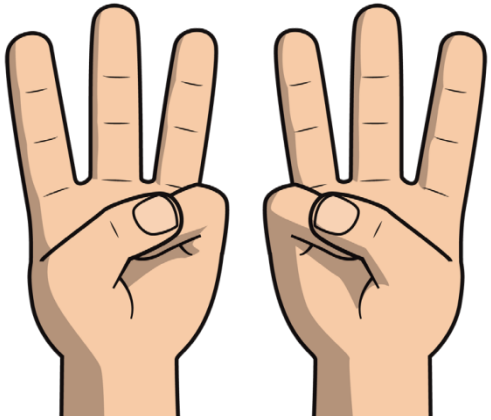
## Mental Multiplication

### Year 1

#### Doubling and halving

Find doubles to double 5 using fingers

e.g. *double 3*



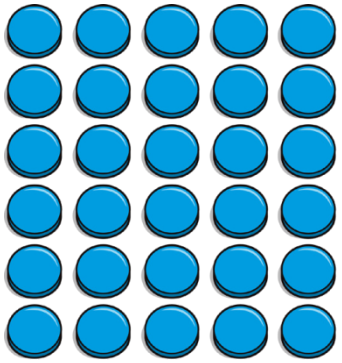
### Year 2

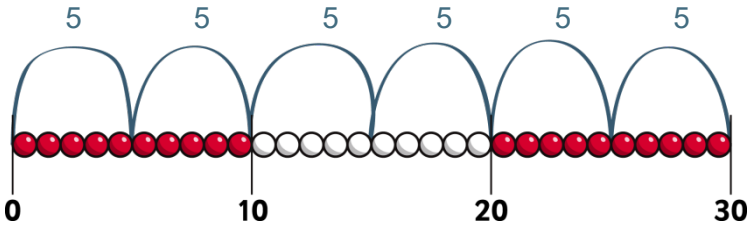
#### Grouping

Use arrays to find answers to multiplication and relate to 'clever' counting

e.g. *3 × 4 as three lots of four things*

e.g. *6 × 5 as six steps in the 5s count as well as six lots of five*






Understand that 5 × 3 can be worked out as three 5s or five 3s

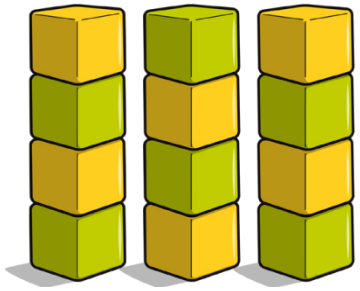
## Mental Multiplication

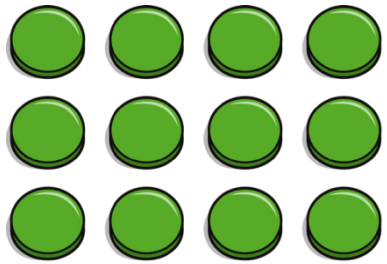
### Year 1

#### Grouping

Begin to use visual and concrete arrays and sets of objects to find the answers to 'three lots of four' or 'two lots of five'

e.g. *three lots of four*



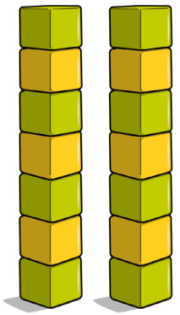


### Year 2

#### Using number facts

Know doubles to double 20

e.g. *double 7 is 14*



Start learning ×2, ×5, ×10 tables, relating these to 'clever' counting in 2s, 5s, and 10s

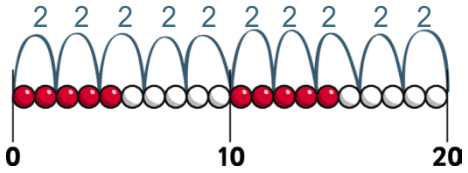
e.g. *5 × 10 = 50, and five steps in the 10s count = 10, 20, 30, 40, 50*

Mental Division

## Year 1

### Counting in steps ('clever' counting)

Count in 2s

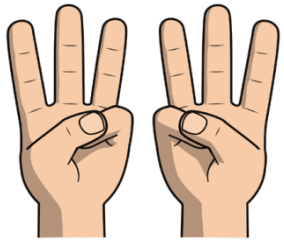



Count in 10s

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

### Doubling and halving

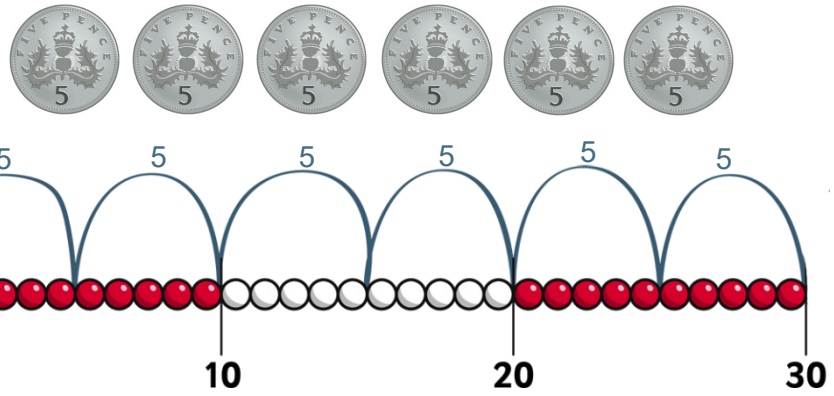
Find half of even numbers up to 12, including realising that it is hard to halve an odd number



## Year 2

### Counting in steps ('clever' counting)

Count in 2s, 5s and 10s

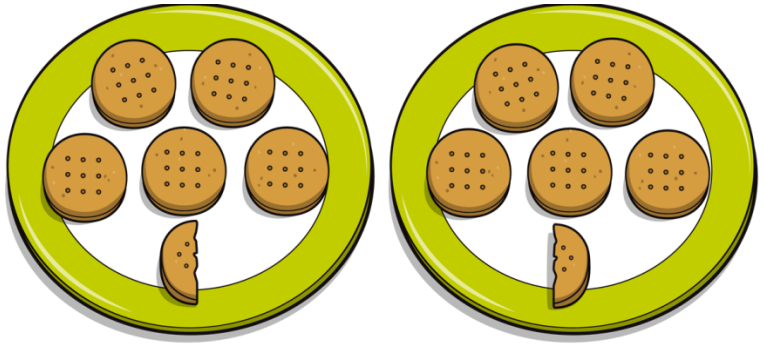



Begin to count in 3s

### Doubling and halving

Find half of numbers up to 40, including realising that half of an odd number gives a remainder of 1 or an answer containing a $\frac{1}{2}$

e.g. *$\frac{1}{2}$ of 11 = 5 $\frac{1}{2}$*



Begin to know half of multiples of 10 to 100

e.g. *half of 70 is 35*

## Mental Division

### Year 1

#### Grouping

Begin to use visual and concrete arrays and 'sets of' objects to find the answers to questions such as *'How many towers of three can I make with twelve cubes?'*

#### Sharing

Begin to find half of a quantity using sharing

e.g. *find half of 16 cubes by giving one each repeatedly to two children*

### Year 2

#### Grouping

Relate division to multiplication by using arrays or towers of cubes to find answers to division

e.g. *'How many towers of five cubes can I make from twenty cubes?' as* _ × 5 = 20 *and also as* 20 ÷ 5 = _

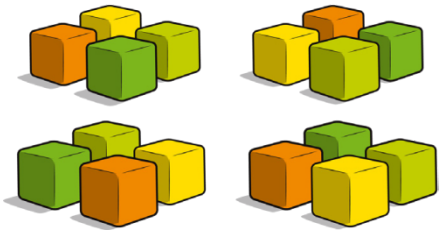
Relate division to 'clever' counting and hence to multiplication

e.g. *'How many fives do I count to get to twenty?'*

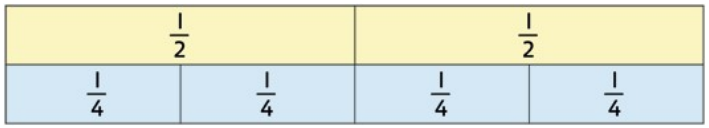
#### Sharing

Begin to find half or a quarter of a quantity using sharing

e.g. *find a quarter of 16 cubes by sorting the cubes into four piles*



Find 1/4, 1/2, 3/4 of small quantities




#### Using number facts

Know half of even numbers to 24

Know ×2, ×5 and ×10 division facts

Begin to know ×3 division facts