

# **Maths methods**

## **Key Stage 2: Year 5 and Year 6**

**Maths methods and strategies taught in school now are very different from those that many parents learned at school. This can often cause confusion when parents are trying to support their child at home.**

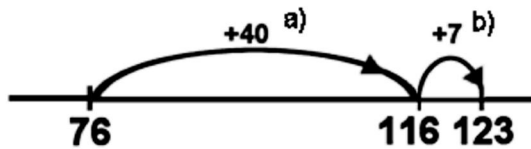
**This document shows the main methods and vocabulary taught in each year group for addition, subtraction, multiplication and division. Each child's progress is different but most children will acquire these methods by the end of their year.**

# Addition

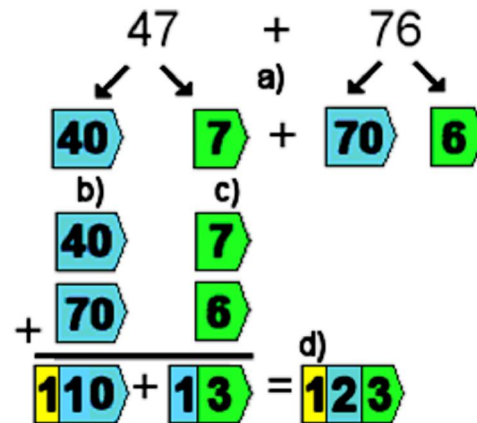
## Visual

$$47 + 76$$

(change order to start with larger number)



## Jottings



## Formal

$$47 + 76$$

$$\begin{array}{r} \text{c) } 47 \\ + \text{a) } 76 \\ \hline 123 \\ \text{b) } \end{array}$$

- a) Add 4 groups of tens
- b) Then add 7 units

- a) Partition numbers into tens and units
- b) Add groups of ten
- c) Add units
- d) Add together tens and units

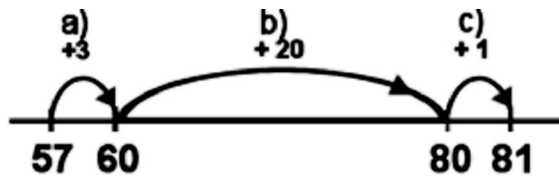
- a) Add units first
- b) Carry the tens
- c) Now add all the tens

**Key Vocabulary: Addition+Sum+Add+Total+Plus+Increase+More Than+Altogether**

# Subtraction

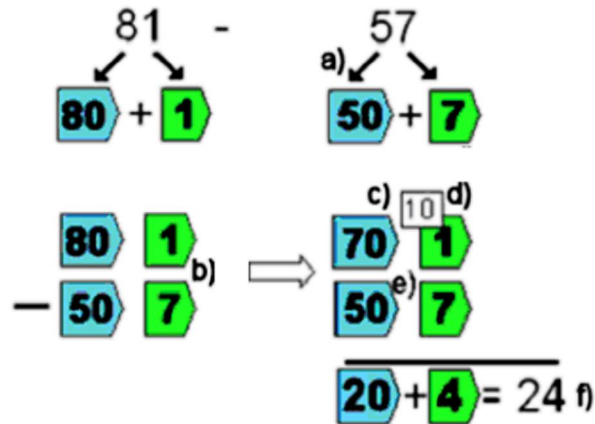
## Visual

$$81 - 57$$



Add the jumps =  $3 + 20 + 1 = 24$

## Jottings



## Formal

$$81 - 57$$

$$\begin{array}{r} \text{b) } 7 \quad \text{c) } 1 \\ \text{d) } \overline{) 81} \\ \underline{57} \quad \text{a) } \\ 24 \end{array}$$

81 - 57 could mean find the difference between the two numbers so we add on from the smallest number.

- a) Add on to next multiple of 10
- b) Add on groups of ten
- c) Add on any extra units needed

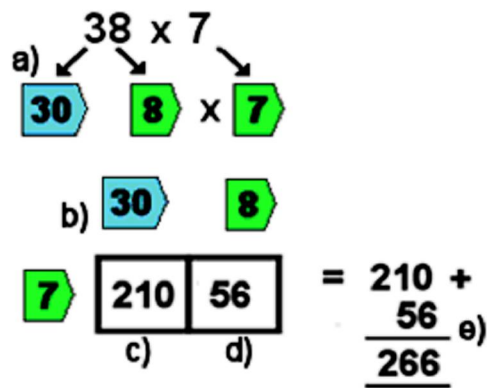
- a) Partition numbers into tens and units
- b) Start with units, 1 take 7
- c) To help us do this, we take 1 group of ten from 80 ...
- d) ... to give us 11 take 7 which gives 4
- e) Now we do 70 take 50 which gives 20
- f) Answer is 24

- a) Start with the units 1 take 7
- b) Take one group of ten from 80, leaving 7 tens
- c) This now gives us 11 take 7 which is 4
- d) 7 tens take 5 tens gives 2 tens

**Key Vocabulary:** Subtract-Take Away-Reduce-Decrease-Minus-Difference-Less Than

# Multiplication

## Visual



## Jottings

$$38 \times 7$$

$$\begin{array}{r} 38 \\ \times 7 \\ \hline 56 \\ 210 \\ \hline 266 \end{array}$$

(7 x 8) a)  
 (7 x 30) b)

## Formal

$$38 \times 7$$

c)  $38$  a)  
 $\times 7$   
 d)  $\underline{266}$  b)  
       5

- a) Partition number into tens and units
- b) Arrange into a grid
- c) Multiply 7 by 30
- d) Multiply 7 by 8
- e) Add together results from multiplying

Can you see how points a and b above relate to the answers c and d on the grid in the previous method.

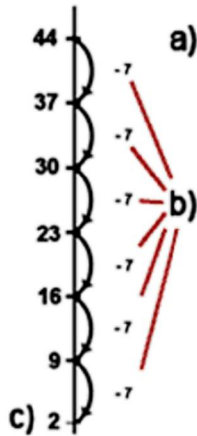
- a) Multiply 7 by 8 which gives 56
- b) We carry the 5 tens
- c) Multiply 7 by 3 tens, which gives 21 tens ...
- d) ...plus the 5 tens equals 26 tens.

**Key Vocabulary: Multiply x Times x Product x Multiplication**

# Division

## Visual

$$44 \div 7$$



**Answer is: 6 jumps with 2 left over**

## Jottings

$$161 \div 7$$

$$\begin{array}{r}
 23 \text{ e)} \\
 7 \overline{)161} \\
 \underline{-70} \quad (10 \times 7) \text{ a)} \\
 91 \\
 \underline{-70} \quad (10 \times 7) \text{ b)} \\
 21 \\
 \underline{-21} \quad (3 \times 7) \text{ c)} \\
 0 \text{ d)}
 \end{array}$$

$$10 + 10 + 3 = 23$$

## Formal

$$584 \div 4$$

$$\begin{array}{r}
 146 \\
 4 \overline{)584} \\
 \underline{4} \quad \text{a)} \\
 18 \\
 \underline{16} \quad \text{b)} \\
 24 \\
 \underline{20} \quad \text{c)} \\
 4
 \end{array}$$

### Repeated Subtraction

How many 7s can you remove from 44?

- Keep removing chunks of 7
- How many chunks of 7 can you remove?
- Is there a remainder?

How many chunks of 7 in 161?

- Remove 10 lots of 7 as our chunksize
- Keep removing chunks of (10 x 7) until you cannot.
- Use your times table knowledge to remove the last chunk
- Is there a remainder?
- How many chunks of 7 have you removed in total?

a) How many 4s in 5?

*1 remainder 1*

b) Carry the remainder in front of the next digit, then how many 4s in 18?

*4 remainder 2*

c) Carry the remainder in front of the next digit, then how many 4s in 24?

*6*

d) How many 4s in 584?

**Key Vocabulary: Division ÷ Sharing ÷ Grouping**