

St John The Baptist CofE primary School Progression in Addition

ADDITION

Skills and knowledge covered

- Number bonds to 10 and then to 20
- Understanding of place value
- Counting on
- Numbers can be added in any order
- More than 2 numbers can be added
- Addition is the inverse of subtraction

Addition can be seen as:

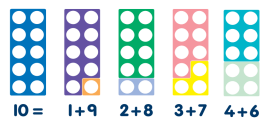
- Combining 2 or more sets to make a total
- Counting on steps along a number line

Key vocabulary:
Add, more, plus, increase, altogether, total, how many more, sum

Visual models and prompts



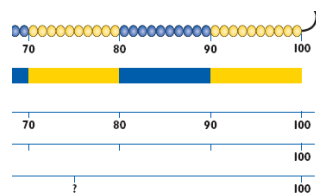
6 is 5 and 1 more
 $6 = 5 + 1$



$10 = 1+9$ $2+8$ $3+7$ $4+6$



$10 = 5 + 5$



Jottings

Number line:

$37 + 45$

Start with the largest number first

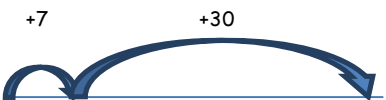
$+5 + 2$ $+10$ $+10$ $+10$



45 50 52 62 72 82

Emphasise getting to the nearest multiple of 10 first

Progress onto using more efficient jumps



45 52 82

Expanded written method

Expanded column method for addition, using partitioning (no carrying):

Add ones first $32 + 25$

$$\begin{array}{r} 30 + 2 \\ 20 + 5 \\ 50 + 7 \end{array}$$

Using partitioning (with carrying):

$37 + 45$

Add ones first $45 + 37 =$

$$\begin{array}{r} 40 + 5 \\ 30 + 7 \\ 70 + 12 = 82 \end{array}$$

$$\begin{array}{r} 45 \\ + 37 \\ \hline 12 \quad (5 + 7) \\ 70 \quad (40 + 30) \\ \hline 82 \quad (12 + 70) \end{array}$$

Then to

$$\begin{array}{r} 40 + 5 \\ 30 + 7 \\ \hline 80 + 2 = 82 \\ 10 \end{array}$$

Compact, most efficient method

Column method (no carrying):

$$\begin{array}{r} 32 \\ + 43 \\ \hline 75 \end{array}$$

Column method (with carrying):

$$\begin{array}{r} 45 \\ + 37 \\ \hline 82 \end{array}$$

Progressing onto carrying to the tens, hundreds and thousands column. Larger number first

$$\begin{array}{r} 765 \\ + 489 \\ \hline 1254 \end{array}$$

Expanded column method using decimals

$$\begin{array}{r} 36.8 \\ + 49.3 \\ \hline 1.1 \quad (0.8 + 0.3) \\ 15.0 \quad (6 + 9) \\ 70.0 \quad (30 + 40) \\ \hline 86.1 \end{array}$$

Column method using decimals

$$\begin{array}{r} 36.8 \\ + 49.3 \\ \hline 86.1 \end{array}$$