

Don't Count, Calculate...

From an early age children need to use known facts to help them calculate rather than count on or back in ones.

For $8 + 4$ I know $8 + 2 = 10$ so there more would be 12. Number bonds for 10 help me to cross the tens.

$$\begin{array}{r} 8 + 4 = 12 \\ \text{2} \quad \text{2} \\ \hline 38 + 4 = 42 \\ 48 + 4 = 52 \end{array}$$

$$45 + 12 = 57$$

I know $45 + 10 = 55$ and then 2 more is 57.

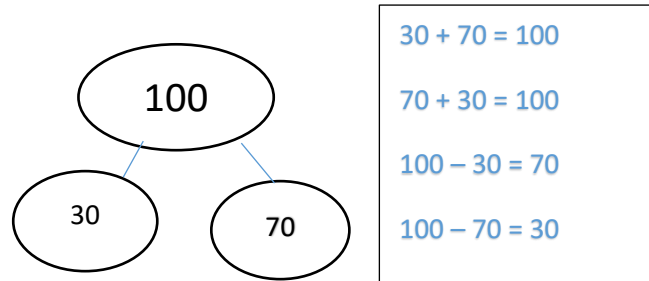
$$56 - 9 = 47$$

I know 10 less than 56 is 46 but I need to add 1 more so the answer is 47.

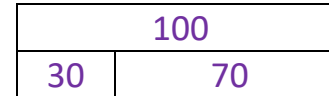
Addition and Subtraction can be represented in different ways...

These structures show the relationship between addition and subtraction.

Part-Part Whole Model



Bar Model



True or False?

$$1\text{m} = 20\text{cm} + 80\text{cm}$$

$$89\text{p} - 20\text{p} = 87\text{p}$$

$$10 + 3 > 20 - 6$$

Year 2 Addition and Subtraction

Problems

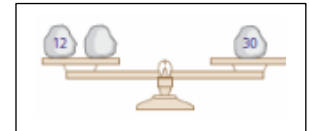
Dan needs 80 g of sugar for his recipe. There is 45 g left in the bag. How much more does he need to get?

Comparing Numbers.....

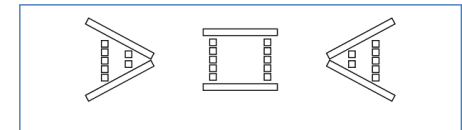


Children need to recognise that = is used to equate (balance) what is on the left of and what is on the right side of this symbol. This will help them solve missing number questions. Vary where the symbol is used in the number sentence.

$$\begin{aligned} 3 + 4 &= 6 + 1 \\ 100 - 20 &= 90 - 10 \\ 34 &= \square + 4 \\ 100 - \square &= 20 \end{aligned}$$



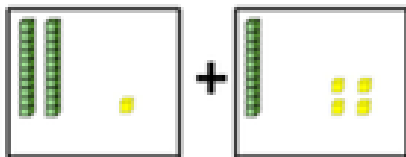
As well as equality (=), children need to experience inequality – **greater than** or **less than**.



$$\begin{aligned} 31 > 13 \quad \text{and} \quad 15 < 51 \\ 30 + 10 < 5 + 37 \\ 100 - 20 > 99 - 9 \end{aligned}$$

They can also be used in missing number problems e.g. $5 + 7 \blacksquare 5 + 6$

We can use equipment to find the total of 2 numbers. Understanding the value of tens and ones helps us to record our results too. Coins reinforce place value too.



$$\begin{array}{r} 21 + 14 \\ \text{T} \quad \text{U} \\ 20 \quad 1 \\ + 10 \quad 4 \\ \hline 30 \quad 5 = 35 \end{array}$$



Use a variety of words

add, addition, more, plus, sum, total, altogether, how many more, subtract, subtraction, take away, minus, less than, difference between

What is the same and what is different?

$$\begin{aligned} 10 + 7 &= 17 & 50 - 5 &= 45 \\ 20 + 7 &= 27 & 55 - 5 &= 50 \\ 30 + 7 &= 37 & 60 - 5 &= 55 \\ 40 + 7 &= 47 & 65 - 5 &= 60 \end{aligned}$$

Always Sometimes Never?

If you add 8 to an odd number, then the answer will be odd.