

YR1 ADDITION AND SUBTRACTION KNOWLEDGE ORGANISER

Key Concepts

- Read and write calculations using + - and =
- Use number bonds and related subtraction facts within 20
- Add and subtract one and two digit numbers to 20.
- Solve missing number problems

Key Vocabulary

- symbol
- add
- more
- plus
- make
- altogether
- subtract
- take away
- less
- equals
- number bonds
- number line



Addition

When carrying out addition the mathematical symbols + and = should be recognised and applied.

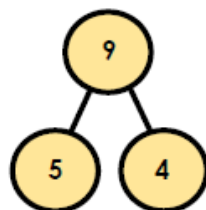
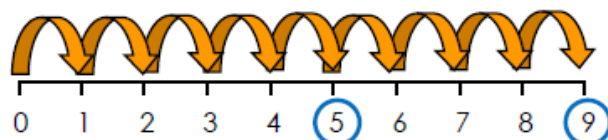
For example, if there are 4 orange and 2 blue counters, there are 6 counters in total.



This can be written as $4 + 2 = 6$.
Four add two equals 6.

Adding Numbers by Counting All

One strategy used when adding is counting all of the objects to find the answer. For $5 + 4 = 9$, you count to 5 before counting another 4 to reach 9.



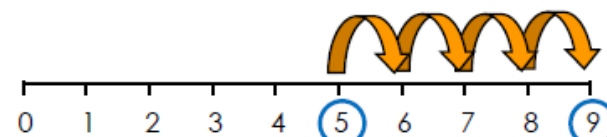
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Adding Numbers by Counting On

Another strategy to use is counting on from the first number to reach the answer.

For $5 + 4 = 9$, you start at 5 and count on 4 more.



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Number Bonds with Numbers to 10

It is important to understand all of the ways that each number to 10 can be partitioned. This is called a number bond.



These are all of the number bonds for the number 5!

$$0 + 5 = 5$$

$$1 + 4 = 5$$

$$2 + 3 = 5$$

$$3 + 2 = 5$$

$$4 + 1 = 5$$

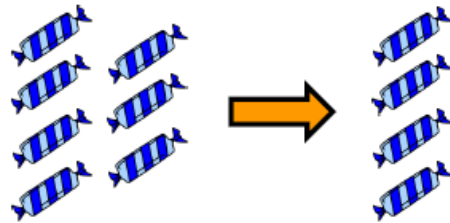
$$5 + 0 = 5$$

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Early Subtraction

First experiences of subtraction should be practical in a real life context before using the - symbol.

For example. If there were 7 sweets and 3 of them were eaten, how many would be left?



First, there were 7. Now, there are 4.

"Taking Away"

Before moving on to a more formal method, continue using practical examples. Use the - symbol, teaching the concept of 'taking away'.

For example, there were 5 balloons. 2 blew away. How many are there now?



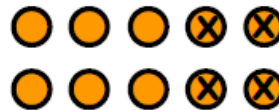
$5 - 2 = 3$
Five take away 2 equals 3.

Subtracting Pictorially

Drawing and crossing out is an effective way of starting to formalise subtraction.



For $10 - 4$, you need to draw ten circles and cross out 4.



Subtracting on a Number Line

In Year 1, fluency in carrying out subtraction using a number line should be mastered.

For $8 - 3$, you should start on the number 8 and count back 3. The answer is 5. The number sentence is $8 - 3 = 5$.



Misconception Alert!



Remember not to include the starting number in your steps backwards!

Fact Families

As more confidence is built with both addition and subtraction, links and patterns will start to be seen between them.



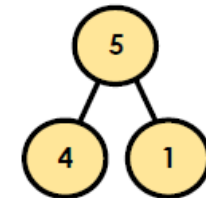
With 3 numbers, you can write 8 different number sentences.

$$4 + 1 = 5$$

$$1 + 4 = 5$$

$$5 - 4 = 1$$

$$5 - 1 = 4$$



$$5 = 4 + 1$$

$$5 = 1 + 4$$

$$4 = 5 - 1$$

$$1 = 5 - 4$$

Missing Numbers

You can use your knowledge of number bonds and fact families to help find missing numbers.

9	
7	2

$$? + 2 = 9$$



If something add 2 equals 9, then 9 take away 2 equals the missing number. I know it is 7.