

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

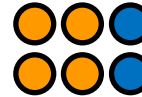
- symbol
- add
- more
- plus
- make
- altogether
- subtract
- take away
- less
- equals
- number bonds
- number line



Addition

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

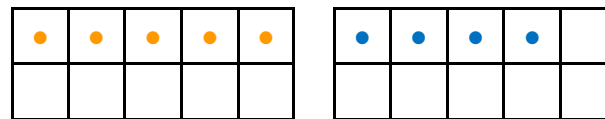
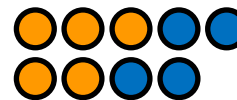
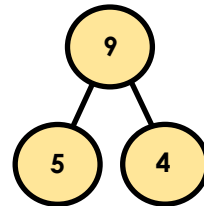
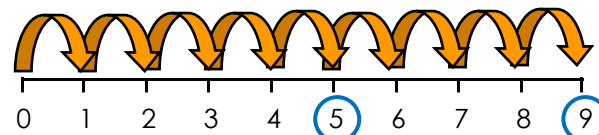
For example, if there are 4 orange and 2 blue counters, there are 6 counters in total.



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

Adding Numbers by Counting All

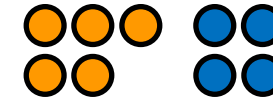
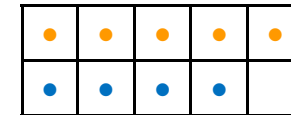
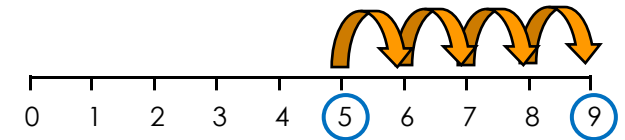
One strategy used when adding is counting all of the objects to find the answer. For $5 + 4 = 9$, you count to 5 before counting another 4 to reach 9.



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.



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!

$$0 + 5 = 5$$

$$1 + 4 = 5$$

$$2 + 3 = 5$$

$$3 + 2 = 5$$

$$4 + 1 = 5$$

$$5 + 0 = 5$$

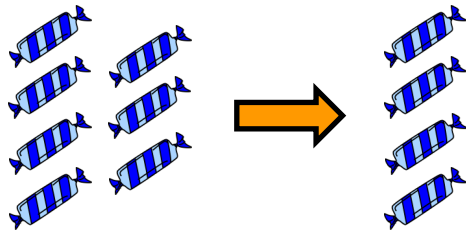


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Early Subtraction

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?



$$5 - 2 = 3$$

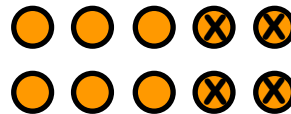
Five take away 2 equals 3.

Subtracting Pictorially

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



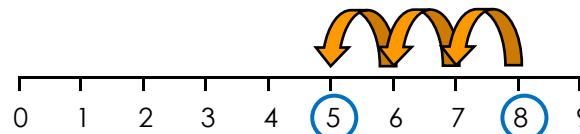
For $10 - 4$, you need to draw ten circles and cross out 4.



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!



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Fact Families

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



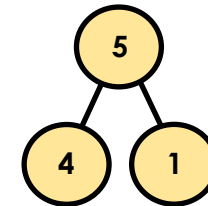
With 3 numbers, you can write 8 different number sentences.

$$4 + 1 = 5$$

$$1 + 4 = 5$$

$$5 - 4 = 1$$

$$5 - 1 = 4$$



$$5 = 4 + 1$$

$$5 = 1 + 4$$

$$4 = 5 - 1$$

$$1 = 5 - 4$$

Missing Numbers

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

9	
7	2

$$\boxed{?} + 2 = 9$$



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