

Year Maths

Children will now start to develop strategies for adding and subtracting numbers within 20. These strategies include: **Counting on:** Children will learn to count on from the biggest number, either in their heads, on their fingers and using a number line. Knowing that addition is commutative (i.e. it can be done in any order), children should recognise that the most efficient way is to start from the biggest number. Careful attention should be given to ensure children do not include their start number when they use this method. **Known facts:** Children will use their knowledge of number bonds to 10 to find number bonds to 20. They should understand that the ones will stay the same but that one number will also have a ten. For example, $7 + 3$ could become $17 + 3$ or $7 + 13$. Significant time is spent practising subtracting numbers from 20 (e.g. $20 - 8$) as this can be more difficult to grasp. **Adding by making 10:** To add numbers such as $8 + 7$, children will use their knowledge of numbers bonds within 10 to make 10 first (e.g. by partitioning the 7 into 2 and 5 and adding the 2 to the 8) and then add on the remaining ones (in this case 5). Using their knowledge of commutativity, they should see that it does not matter which number comes first when using this strategy. **Subtraction - crossing 10:** For a calculation such as $13 - 5$, children will first partition the 5 into 3 and 2. They will then subtract the 3 to make 10, before subtracting the final 2. Children will use ten frames to help them develop these strategies.

Activities & Games!

★ Practise the different strategies described above to answer some of these questions. Which method do you prefer? Which one are you best at? Which one do you find most difficult? Ask an adult to help you get better at it!

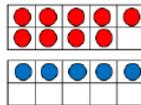
Joseph has 8 flowers growing in his garden. He plants 7 more. How many does he have now?

Helena bought a pack of 14 birthday cards. So far she has sent 6 to her friends. How many does she have left?

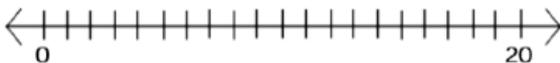
Ask a grown up can make up some more problems for you to solve. Perhaps you can write some of your own too!

★★ I added two numbers together and got the answer 18. What was the calculation? How many different answers can you find?
Now I subtract 2 numbers less than 20 and get the answer 8. What was the calculation? How many different answers can you find?

★★ Can you use this tens frame to explain to someone how to solve $9 + 5$? Try this method out on some other calculations.



★★ Tia is working out $12 - 4$ by counting back on a number line.



Her answer is 9. What has Tia done wrong? Can you explain her mistake? What should the answer be?

★★★ Look at the following biscuits:



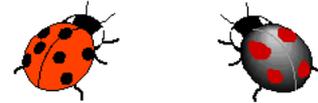
$$\begin{aligned} 11 - 4 &= \\ 11 - 8 &= \\ 15 - 9 &= \\ 15 - 11 &= \end{aligned}$$

Billy was asked some questions and worked them out using these calculations. What were the questions? What are the answers?

Going deeper...

Ladybirds in the Garden!

In Sam and Jill's garden there are two sorts of ladybirds. There are red Seven-Spot ladybirds with 7 black spots, and shiny black Four-Spot ladybirds with 4 red spots.



Sam and Jill looked at a leaf with three ladybirds on it. "One Seven-Spot ladybird," said Sam, "and two Four-Spot ones."

"That's 15 spots altogether!" laughed Jill. "I wonder if we could find ladybirds whose spots add to other numbers. I know how to do 16."

"And 14 is easy too," added Sam.

How would you make 16 and 14 spots with the Seven-Spot and Four-Spot ladybirds? What other numbers can you make with adding 4s and 7s? Can you get lots of numbers from say 4 to 35? Are there some numbers you can't get?

Wonderful websites

[Counting On](#)
[A Great Day for Number Lines!](#)
[Sum Sense](#)
[Rabbit Takeaway](#)
[Cross the Swamp](#)

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