



Key Instant Recall Facts

Year 3 - Autumn 1

I know addition and subtraction facts for all numbers to 20.

The list below gives some examples, but they should know all the number bonds for each number. The aim is for instant recall for each fact in the fact family.

$11 = 11 + 0$	$19 = 19 + 0$	$16 = 16 + 0$	<u>Example of a fact family:</u> $17 = 13 + 4$ $17 = 4 + 13$ $17 - 13 = 4$ $17 - 4 = 13$
$11 = 10 + 1$	$19 = 18 + 1$	$16 = 15 + 1$	
$11 = 9 + 2$	$19 = 17 + 2$	$16 = 14 + 2$	
$11 = 8 + 3$	$19 = 16 + 3$	$16 = 13 + 3$	
$11 = 7 + 4$	$19 = 15 + 4$	$16 = 12 + 4$	
$11 = 6 + 5$	$19 = 14 + 5$	$16 = 11 + 5$	
	$19 = 13 + 6$	$16 = 10 + 6$	
	$19 = 12 + 7$	$16 = 9 + 7$	
	$19 = 11 + 8$	$16 = 8 + 8$	
	$19 = 10 + 9$		

Children should be able to answer the questions in any order, including with the calculations written either side of the equals sign and missing number questions,

e.g. $15 - 8 = 7$ $15 = 8 + 7$ $7 + \square = 15$ $8 = 15 - \square$ $16 - \square = 7 +$

Useful Questions

What do I **add to** 5 to make 19?

What is 17 **take away** 6??

What is 13 **less than** 15?

How many **more than** 8 is 11?

What is the **difference between** 9 and 13?

Some of these facts will have already been learned in Year 2 and some of them are easily worked out by using other root facts (e.g. $\square + \square = 16$ can be worked out by using $2 + 4 = 6$ so $12 + 4 = 16$)

The secret to success is to practise little and often - could you practise on the way to school or during a car journey?

You don't need to practise them all at once - perhaps have a fact family of the day. If they can tell you one fact, can they say all the other facts in the family?

Use doubles and near doubles to help (If $6 + 6 = 12$, $6 + 7$ is one more and $6 + 5$ is one less)

Make it fun!

- Use practical resources - Make collections of up to 20 objects. Show some and ask questions such as, "How many more would I need to \square take?" Cover some objects and ask how many are hidden.
- <http://www.conkermaths.org/cmweb.nsf/products/conkerkirfs.html> Game 3 - number bonds for each number to 20
- <http://www.topmarks.co.uk/maths-games/hit-the-button> Addition or subtraction within 20
- <http://www.primarygames.com/math/mathtilesaddition0to20/>
- http://www.wldps.com/gordons/Loop_cards.swf interactive loop cards
- Timed Games: How well are you doing? How many questions can you answer in 2 minutes? Can you beat your own record?

Deepen and apply

- Captain Conjecture says, 'If you add 6 to a number ending in 7 you will always get a number ending in 3.' Is he correct? Explain your answer.
- Is it always, sometimes or never true that a number less than 10 added to another number less than 10 = a number less than 10? How do you know?
- $3 + \square = \square - 7$ how many ways can this be true using numbers less than 20?
- <http://nrich.maths.org/11114> Totality
- <http://nrich.maths.org/53> Roll those Dice

- <http://nrich.maths.org/10091> Strike it out
- There are 12 cakes on a plate swimming in a lake. I eat 4, how many are left? How do you know? Can you explain it?
- How many ways can you make 19 using 3 numbers? (example: $6 + 11 + 2$)
- $\square + \square = \square + \square$ What numbers could you put in here to make the sentences true?
- $\square + \square = \square - \square$ What numbers could you put in here to make the sentences true?