



Key Instant Recall Facts KIRFs

To help develop children's fluency in mathematics, we ask them to learn Key Instant Recall Facts each half term.

Children should aim to practise their KIRFs daily.

Please see the attached lists of KIRFs which are align to the maths curriculum. They are intended to be challenging and where possible that children will be taught the necessary maths in lessons beforehand.





Key Instant Recall Facts

Year 1 – Autumn 2

I know number bonds for each number to 6.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts **instantly**.

$0 + 1 = 1$	$0 + 4 = 4$	$0 + 6 = 6$
$1 + 0 = 1$	$1 + 3 = 4$	$1 + 5 = 6$
	$2 + 2 = 4$	$2 + 4 = 6$
$0 + 2 = 2$	$3 + 1 = 4$	$3 + 3 = 6$
$1 + 1 = 2$	$4 + 0 = 4$	$4 + 2 = 6$
$2 + 0 = 2$		$5 + 1 = 6$
	$0 + 5 = 5$	$6 + 0 = 6$
$0 + 3 = 3$	$1 + 4 = 5$	
$1 + 2 = 3$	$2 + 3 = 5$	
$2 + 1 = 3$	$3 + 2 = 5$	
$3 + 0 = 3$	$4 + 1 = 5$	
	$5 + 0 = 5$	

Key Vocabulary

What is 3 **add** 2?

What is 2 **plus** 2?

What is 5 **take away** 2?

What is 1 **less than** 4?

They should be able to answer these questions in any order, including missing number questions e.g. $3 + \bigcirc = 5$ or $4 - \bigcirc = 2$.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these KIRFs while walking to school or during a car journey? You don't need to practise them all at once: perhaps you could have a fact of the day. If you would like more ideas, please speak to your child's teacher.

Use practical resources – Your child has one potato on their plate and you give them three more. Can they predict how many they will have now?

Make a poster – We use Numicon at school. You can find pictures of the Numicon shapes here: bit.ly/NumiconPictures – your child could make a poster showing the different ways of making 5.

Play games – You can play number bond pairs online at www.conkermaths.com and then see how many questions you can answer in just one minute.



Key Instant Recall Facts

Year 2 – Autumn 1

I know number bonds to 20.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts **instantly**.

$0 + 20 = 20$	$20 + 0 = 20$	$20 - 0 = 20$	$20 - 20 = 0$
$1 + 19 = 20$	$19 + 1 = 20$	$20 - 1 = 19$	$20 - 19 = 1$
$2 + 18 = 20$	$18 + 2 = 20$	$20 - 2 = 18$	$20 - 18 = 2$
$3 + 17 = 20$	$17 + 3 = 20$	$20 - 3 = 17$	$20 - 17 = 3$
$4 + 16 = 20$	$16 + 4 = 20$	$20 - 4 = 16$	$20 - 16 = 4$
$5 + 15 = 20$	$15 + 5 = 20$	$20 - 5 = 15$	$20 - 15 = 5$
$6 + 14 = 20$	$14 + 6 = 20$	$20 - 6 = 14$	$20 - 14 = 6$
$7 + 13 = 20$	$13 + 7 = 20$	$20 - 7 = 13$	$20 - 13 = 7$
$8 + 12 = 20$	$12 + 8 = 20$	$20 - 8 = 12$	$20 - 12 = 8$
$9 + 11 = 20$	$11 + 9 = 20$	$20 - 9 = 11$	$20 - 11 = 9$
$10 + 10 = 20$		$20 - 10 = 10$	

Key Vocabulary

What do I **add** to 5 to make 20?

What is 20 **take away** 6?

What is 3 **less than** 20?

How many more than 16 is 20?

They should be able to answer these questions in any order, including missing number questions e.g. $19 + \bigcirc = 20$ or $20 - \bigcirc = 8$.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these KIRFs while walking to school or during a car journey? You don't need to practise them all at once: perhaps you could have a fact of the day. If you would like more ideas, please speak to your child's teacher.

Use what you already know – Use number bonds to 10 (e.g. $7 + 3 = 10$) to work out related number bonds to 20 (e.g. $17 + 3 = 20$).

Use practical resources – Make collections of 20 objects. Ask questions such as, "How many more conkers would I need to make 20?"

Make a poster – We use Numicon at school. You can find pictures of the Numicon shapes here: bit.ly/NumiconPictures – your child could make a poster showing the different ways of making 20.

Play games – You can play number bond pairs online at www.conkermaths.com and then see how many questions you can answer in just one minute.



Key Instant Recall Facts

Year 3 – Autumn 1

I know number bonds for all numbers to 20.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts **instantly**.

$2 + 9 = 11$

$3 + 8 = 11$

$4 + 7 = 11$

$5 + 6 = 11$

$3 + 9 = 12$

$4 + 8 = 12$

$5 + 7 = 12$

$6 + 6 = 12$

$4 + 9 = 13$

$5 + 8 = 13$

$6 + 7 = 13$

$5 + 9 = 14$

$6 + 8 = 14$

$7 + 7 = 14$

$6 + 9 = 15$

$7 + 8 = 15$

$7 + 9 = 16$

$8 + 8 = 16$

$8 + 9 = 17$

$9 + 9 = 18$

Example of a fact family

$6 + 9 = 15$

$9 + 6 = 15$

$15 - 9 = 6$

$15 - 9 = 6$

Examples of other facts

$4 + 5 = 9$

$13 + 5 = 18$

$19 - 7 = 12$

$10 - 6 = 4$

Key Vocabulary

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?

This list includes the most challenging facts but children will need to learn **all** number bonds for each number to 20 (e.g. $15 + 2 = 17$). This includes related subtraction facts (e.g. $17 - 2 = 15$).

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these KIRFs while walking to school or during a car journey? You don't need to practise them all at once: perhaps you could have a fact of the day. If you would like more ideas, please speak to your child's teacher.

Buy one get three free - If your child knows one fact (e.g. $8 + 5 = 13$), can they tell you the other three facts in the same fact family?

Use doubles and near doubles – If you know that $6 + 6 = 12$, how can you work out $6 + 7$? What about $5 + 7$?

Play games – There are missing number questions at www.conkermaths.com. See how many questions you can answer in just one minute.



Key Instant Recall Facts

Year 4 – Autumn 1

I know number bonds to 100.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts **instantly**.

Some examples:

$60 + 40 = 100$	$37 + 63 = 100$
$40 + 60 = 100$	$63 + 37 = 100$
$100 - 40 = 60$	$100 - 63 = 37$
$100 - 60 = 40$	$100 - 37 = 63$
$75 + 25 = 100$	$48 + 52 = 100$
$25 + 75 = 100$	$52 + 48 = 100$
$100 - 25 = 75$	$100 - 52 = 48$
$100 - 75 = 25$	$100 - 48 = 52$

Key Vocabulary

What do I **add** to 65 to make 100?

What is 100 **take away** 6?

What is 13 **less than** 100?

How many more than 98 is 100?

What is the **difference** between 89 and 100?

This list includes some examples of facts that children should know. They should be able to answer questions including missing number questions e.g. $49 + \bigcirc = 100$ or $100 - \bigcirc = 72$.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these KIRFs while walking to school or during a car journey? You don't need to practise them all at once: perhaps you could have a fact of the day. If you would like more ideas, please speak to your child's teacher.

Buy one get three free - If your child knows one fact (e.g. $8 + 5 = 13$), can they tell you the other three facts in the same fact family?

Use number bonds to 10 - How can number bonds to 10 help you work out number bonds to 100?

Play games – There are missing number questions at www.conkermaths.com. See how many questions you can answer in just 90 seconds. There is also a number bond pair game to play.



Key Instant Recall Facts

Year 5 – Autumn 1

I know decimal number bonds to 1 and 10.

By the end of this half term, children should know the following facts. The aim is for them to recall these facts **instantly**.

Some examples:

$0.6 + 0.4 = 1$	$3.7 + 6.3 = 10$
$0.4 + 0.6 = 1$	$6.3 + 3.7 = 10$
$1 - 0.4 = 0.6$	$10 - 6.3 = 3.7$
$1 - 0.6 = 0.4$	$10 - 3.7 = 6.3$

$0.75 + 0.25 = 1$	$4.8 + 5.2 = 10$
$0.25 + 0.75 = 1$	$5.2 + 4.8 = 10$
$1 - 0.25 = 0.75$	$10 - 5.2 = 4.8$
$1 - 0.75 = 0.25$	$10 - 4.8 = 5.2$

Key Vocabulary

What do I **add** to 0.8 to make 1?

What is 1 **take away** 0.06?

What is 1.3 **less than** 10?

How many more than 9.8 is 10?

What is the **difference** between 0.92 and 10?

This list includes some examples of facts that children should know. They should be able to answer questions including missing number questions e.g. $0.49 + \bigcirc = 10$ or $7.2 + \bigcirc = 10$.

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these KIRFs while walking to school or during a car journey? You don't need to practise them all at once: perhaps you could have a fact of the day. If you would like more ideas, please speak to your child's teacher.

Buy one get three free - If your child knows one fact (e.g. $8 + 5 = 13$), can they tell you the other three facts in the same fact family?

Use number bonds to 10 - How can number bonds to 10 help you work out number bonds to 100?

Play games – There are missing number questions at www.conkermaths.com. See how many questions you can answer in just 90 seconds. There is also a number bond pair game to play.



Key Instant Recall Facts

Year 6 – Autumn 1

I know the multiplication and division facts for all times tables up to 12×12 .

By the end of this half term, children should know the following facts. The aim is for them to recall these facts **instantly**.

Please see separate sheet for all times table facts.

This is a chance for Year 6 children to consolidate their knowledge of multiplication and division facts and to increase their speed of recall.

Key Vocabulary

What is 12 **multiplied by** 6?

What is 7 **times** 8?

What is 84 **divided by** 7?

They should be able to answer these questions in any order, including missing number questions e.g. $7 \times \bigcirc = 28$ or $\bigcirc \div 6 = 7$.

Children who have already mastered their times tables should apply this knowledge to answer questions including decimals e.g. $0.7 \times \bigcirc = 4.2$ or $\bigcirc \div 60 = 0.7$

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these KIRFs while walking to school or during a car journey? You don't need to practise them all at once: perhaps you could have a fact family of the day. If you would like more ideas, please speak to your child's teacher.

Speed Challenge – Take two packs of playing cards and remove the kings. Turn over two cards and ask your child to multiply the numbers together (Ace = 1, Jack = 11, Queen = 12). How many questions can they answer correctly in 2 minutes? Practise regularly and see if they can beat their high score.

Online games – There are many games online which can help children practise their multiplication and division facts. www.conkermaths.org is a good place to start.

Use memory tricks – For those hard-to-remember facts, www.multiplication.com has some strange picture stories to help children remember.