



Key Instant Recall Facts

KIRFs

To develop your child's fluency and mental maths skills, we are introducing KIRFs throughout school. **KIRFS are a way of helping your child to learn by heart, key facts and information which they need to have instant recall of.**

KIRFs are designed to support the development of mental maths skills that underpin much of the maths work in our school. They are particularly useful when calculating, adding, subtracting, multiplying or dividing. They contain number facts such as number bonds and times tables that need constant practise and rehearsal, so children can recall them quickly and accurately.

Instant recall of facts helps enormously with mental agility in maths lessons. When children move onto written calculations, knowing these key facts is very beneficial and if these facts can be recalled mentally, it frees up the working memory for them to unpick and solve more complex reasoning and problem solving questions. For your child to become more efficient in recalling facts easily, they need to be practised frequently and for short periods of time.

Each half term, children will focus on 1 or 2 Key Instant Recall Facts (KIRFs) to practise and learn at home for the half term. They will also be available on our school website under the maths section and will be sent to parents and carers alongside the curriculum newsletter each term. The KIRFs include links to online games, videos and resources that you may find useful when practising these KIRFs with your child at home. They are not designed to be a time-consuming task and can be practised anywhere – in the car, walking to school, etc. Regular practice - little and often – helps children to retain these facts and keep their skills sharp.

Throughout the half term, the KIRFs will also be practised in school and your child's teacher will assess whether they have been retained.

**Maths is a journey
not a destination**



Key Instant Recall Facts

Year 2 Autumn A

Know number bonds to 10 and 20.

By the end of this half term, children should be able to mentally recall all pairs of numbers that add together to total 10. They will then use this knowledge to know pairs of numbers that total 20.

Possible Methods. - Use fingers—how many fingers up, how many down to know the pairs to 10. Count out objects to 10 then partition them into 2 different groups to find all the possible pairs to 10. Write the pairs out in order, can you spot a pattern?

Once secure with bonds to 10, this knowledge should be applied to bonds to 20 e.g. if you know $2 + 8 = 10$ then $12 + 8 = 20$ or $2 + 18 = 20$.

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 do not need to practise them all at once; perhaps you could have a fact of the day. Play 'ping pong'. You say a number, your child says the number back that is added to it to total 10 or 20.

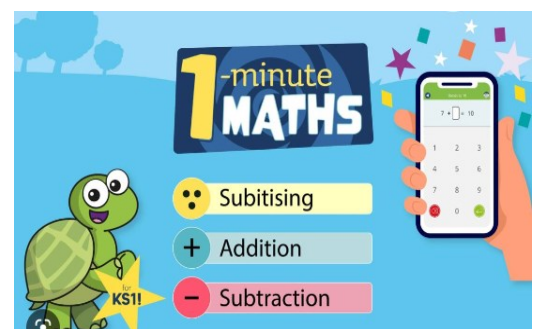
Use practical resources

- Using items around the house put into 2 groups that total 10 or 20.
- Play snap games with numbers 0-20 turn over pairs of cards, if the numbers add together to total 10 or 20 shout snap.
- Play number bond bingo—on a piece of paper write 6 numbers 0-10, bingo caller calls out numbers. If you have the matching pair to make a bond to 10, cover the number. When all covered shout BINGO!

Online games

- [Hit the Button - Quick fire maths practise for 6-11 year olds \(topmarks.co.uk\)](https://www.topmarks.co.uk/Hit-the-Button) (click on number bonds)
- [Save The Whale: Learn bonds of 10, 9, 8, 7, 6 or 5 \(ictgames.com\)](https://www.ictgames.com/save-the-whale)

White Rose Maths—One Minute Maths App





Key Instant Recall Facts

Year 2 Autumn A

Know all addition and subtraction facts for multiples of 10 to 100

By the end of this half term, children should be able to mentally apply their number bonds to 10 knowledge when adding and subtracting with multiples of 10.

For example if $2 + 8 = 10$ then $20 + 80 = 100$.

If $10 - 7 = 3$ then $100 - 70 = 30$.

Possible Methods. - Use fingers—how many fingers up, how many down to know the pairs to 100 when each finger represents a 10 not a one. Count out 10 pence pieces then partition them into 2 different groups to find all the possible pairs to 100. Write the pairs out in order, can you spot a pattern?

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 do not need to practise them all at once; perhaps you could have a fact of the day. Play 'ping pong'. You say a multiple of 10, your child says the number back that is added to it to total 100.

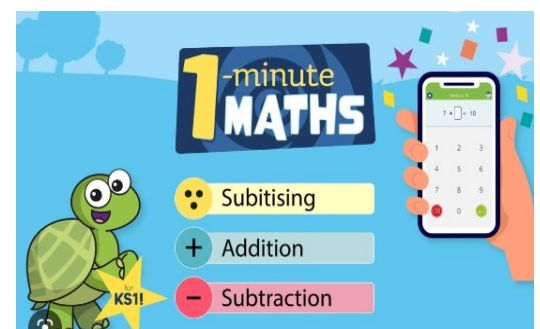
Use practical resources

- Play snap games with multiple of 10 numbers on cards. Turn over pairs of cards, if the numbers add together to total 100 then shout SNAP.
- Play number bond bingo—on a piece of paper write 6 multiple of 10 numbers 10-100, bingo caller calls out numbers. If you have the matching pair to make a bond to 100, cover the number. When all covered shout BINGO!

Online games

- [Hit the Button - Quick fire maths practise for 6-11 year olds \(topmarks.co.uk\)](https://www.topmarks.co.uk) (click on number bonds)

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Key Instant Recall Facts

Year 2 Autumn B

Know multiplication and division facts for the 10 x table.

By the end of this half term, children should be able to use a variety of mental methods and strategies in order to mentally recall the 10 times table facts up to 12×10 and use this knowledge to work out related division facts.

They should be able to answer these questions in any order, including missing number questions e.g. $3 \times \underline{\quad} = 30$ or $\underline{\quad} \div 7 = 10$

Possible Methods. - Songs and chants, there are many times table songs online. Such as [Times tables collection - BBC Teach](#)

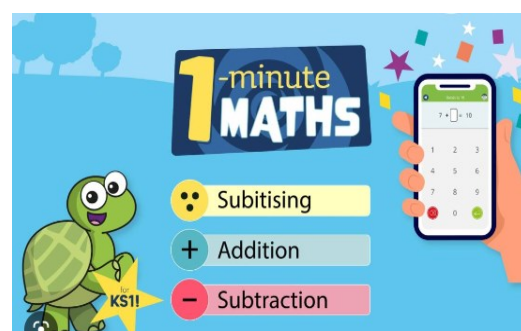
Spot patterns – Look at the pattern that 10 times table is just the same as counting in 10s, which the children should be very familiar with.

Test the Parent – Your child can make up their own division questions for you e.g. What is 80 divided by 10? They need to be able to multiply to create these questions.

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 do not need to practise them all at once; perhaps you could have a fact of the day. Play 'ping pong'. You say a number, your child multiplies or divides it by 10 then says the answer back to you at speed.

- **Online games**
- TT Rockstars—children have individual log ins.
- [Coconut Multiples - Reinforce Times Tables \(topmarks.co.uk\)](#)
- [Hit the Button - Quick fire maths practise for 6-11 year olds \(topmarks.co.uk\)](#) [KS1 Maths - England - BBC Bitesize](#)

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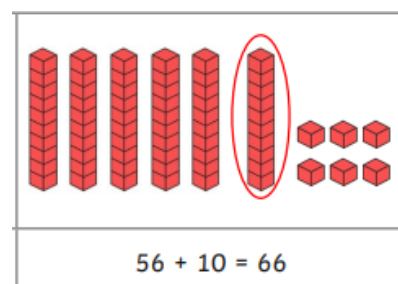
Key Instant Recall Facts

Year 2 Autumn B

Mentally say 10 more and less than a number.

By the end of this half term, children should be able to say, with a quick recall, what is 10 more or ten less than any single or 2 digit number.

Possible Methods. - At school we use practical equipment called base 10 to represent tens and ones. This can be replicated at home using straws or sticks to represent 10s and buttons or pebbles etc to represent ones. When adding ten to the number 35 children can physically add a ten rod/stick/straw etc to see that now the number now has 4 tens but the ones did not change. 10 more than 35 is 45. After lots of practise with practical equipment and seeing the numbers written down, the children will begin to see the pattern that adding or taking away 10 from a 2 digit number will not affect the ones in the number. Soon the children will very quickly be able to tell you ten more/less than a number.



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 do not need to practise them all at once; perhaps you could have a fact of the day. Play 'ping pong'. You say a number, your child says the number that is 10 more/less back to you at speed.

• **Online games**

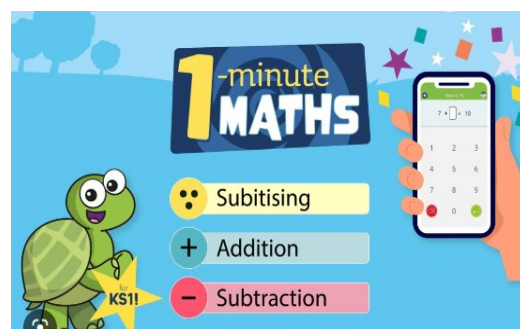
[10 More 10 Less - Find the match \(wordwall.net\)](http://wordwall.net)

[Ten Less Shoot Out \(ictgames.com\)](http://ictgames.com)

[Adding 10 Depthcharger | | Practise 10 more than a 2-digit number \(ictgames.com\)](http://ictgames.com)

[\(4\) 10 More, 10 Less | Math Song for Kids | Adding & Subtracting by 10 | Jack Hartmann - YouTube](#)

White Rose Maths—One Minute Maths App





Key Instant Recall Facts

Year 2 Spring A

Know multiplication and division facts for the 2 x table

By the end of this half term, children should be able to use a variety of mental methods and strategies in order to mentally recall the 2 times table facts up to 12×2 and use this knowledge to work out related division facts.

They should be able to answer these questions in any order, including missing number questions e.g. $2 \times \underline{\quad} = 16$ or $\underline{\quad} \div 2 = 4$

Possible Methods. - Songs and chants, there are many times table songs online. Such as [Times tables collection - BBC Teach](#)

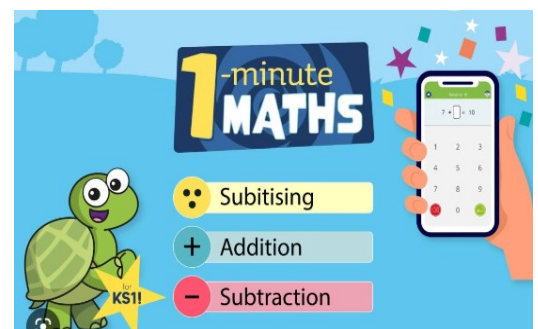
Spot patterns – Look at the pattern that 2 times table is just the same as doubling numbers and it will always be an even number, which the children should be very familiar with.

Test the Parent – Your child can make up their own division questions for you e.g. What is 24 divided by 2? They need to be able to multiply to create these questions.

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 do not need to practise them all at once; perhaps you could have a fact of the day. Play 'ping pong'. You say a number, your child multiplies or divides it by 2 then says the answer back to you at speed.

- **Online games**
- TT Rockstars—children have individual log ins.
- [Coconut Multiples - Reinforce Times Tables \(topmarks.co.uk\)](#)
- [Hit the Button - Quick fire maths practise for 6-11 year olds \(topmarks.co.uk\)](#) [KS1 Maths - England - BBC Bitesize](#)

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Key Instant Recall Facts

Year 2 Spring A

Recognise odd and even numbers up to 100.

By the end of this half term, children should be able to say whether any number, up to 100, is odd or even.

Possible Methods. - Think about even numbers being in a pair. Odd will have an 'odd one out' when pairing up. Count in 2s to recognise odd numbers. Repetition of the pattern of numbers ending in 0, 2, 4, 6, 8 will always be even. Children should be secure from Year 1 in recognising odd and even up to 20. They now move this learning on to looking at larger numbers.

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 do not need to practise them all at once; perhaps you could have a fact of the day. Look at house numbers are they odd or even? Is your age odd or even etc?

Use practical resources

- Using items around the house pair them up to work out if the amount is odd or even. Use the language of odd and even around the home. E.g. how many odd socks do we have in the washing?
- Making up stories linked to home life, we have 25 people coming round to the party, is that odd or even? Will everyone have a partner etc?.

Online games

- [Coconut Odd or Even - Topmarks](#)
- [Odd Even Fruit Splat - Math Game - Sheppard Software Educational Games for kids](#)
- [Catch A Star || Odd or Even Numbers - mobile friendly \(ictgames.com\)](#)



Key Instant Recall Facts

Year 2 Spring B

Know multiplication and division facts for the 5 times table.

By the end of this half term, children should be able to use a variety of mental methods and strategies in order to mentally recall 5 times table facts up to 12×5 and use this knowledge to work out related division facts.

They should be able to answer these questions in any order, including missing number questions e.g. $5 \times \underline{\quad} = 40$ or $\underline{\quad} \div 5 = 9$

Possible Methods. - Songs and chants, there are many times table songs online. Such as [KS1 Maths: The 5 Times Table - BBC Teach](#)

Spot patterns – What patterns can your child spot in the 5 times table? Are there any similarities with the 10 times table?

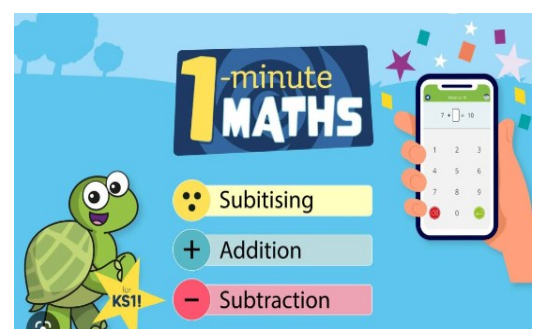
Test the Parent – Your child can make up their own division questions for you e.g. What is 45 divided by 5? They need to be able to multiply to create these questions

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 do not need to practise them all at once; perhaps you could have a fact of the day. Play 'ping pong'. You say a number, your child multiplies or divides it by 5 then says the answer back to you at speed.

Use practical resources

- Using items around the house put into groups of 5.
- Share and divide by 5 in games, card games, teddy bears picnic etc.
- **Online games**
- TT Rockstars—children have individual log ins.
- [Coconut Multiples - Reinforce Times Tables \(topmarks.co.uk\)](#)
- [Hit the Button - Quick fire maths practise for 6-11 year olds \(topmarks.co.uk\)](#) [KS1 Maths - England - BBC Bitesize](#)

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Key Instant Recall Facts

Year 2, Summer A

Know doubles and halves of numbers to 20.

By the end of this half term, children should be able to use a variety of mental methods and strategies to say what double or half of any number to 20 is.

Possible Methods: There are lots of doubling and halving songs online, for example [Adding Doubles | Fun Math Song For Kids | Jack Hartmann - YouTube](#).

What patterns can they spot when doubling - can they see a link to the 2 times table?

What do they notice when halving an even or odd amount - what does this mean?

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 do not need to practise them all at once; perhaps you could have a fact of the day. Play 'ping pong'. You say a number, your child doubles or halves it and then says the answer back to you at speed.

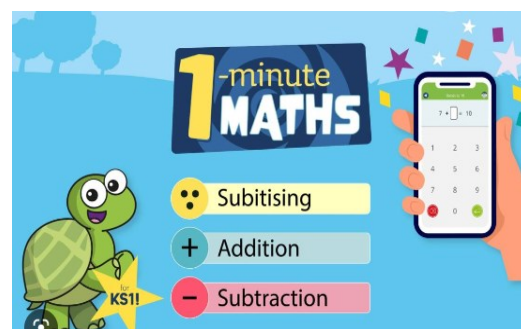
Use practical resources

- Give your child a group of objects. Can they double the objects, can they half them?
- Make up games when completing everyday tasks, e.g. can they half their group of sweets, can they double the portion size of a recipe?
- Asking questions during daily routines, for example I have 12 socks to hang up to dry and I also have each socks pair to hang up. How many socks do I need to dry altogether?

Online games

- [Loop Cards - 5-11 year olds - Topmarks](#)
- [Hit the Button - Quick fire maths practise for 6-11 year olds \(topmarks.co.uk\)](#) [KS1 Maths - England - BBC Bitesize](#)
- [Archery Doubles - mobile friendly \(ictgames.com\)](#)

White Rose Maths – One Minute Maths App:





Key Instant Recall Facts

Year 2, Summer B

Know the number of minutes in an hour and the number of hours in a day.

By the end of this half term, children should know there are 60 minutes in an hour and 24 hours in a day. They should also be able to tell you each hour on a 24-hour clock.

Possible Methods: There are lots of songs online that reinforce both the 12 and 24-hour clock systems, for example [12-hour clock and 24-hour clock system Song - YouTube](#)

Look at a clock, 12 lots of 5 make up an hour, can your child tell you what $12 \times 5 = ?$

Top Tips: The secret to success is practising little and often. Use time wisely. Can you link this KIRF to the hour of the day. Play 'ping pong'. You say a number, your child says the time that matches your 12 or 24-hour clock.

Use practical resources

- Use a clock at home to check and reinforce the times of the day.
- Can you challenge your child to complete a task in a certain length of time and use a timer to countdown the time they have left.
- Play time bingo.

Online games

- [Teaching Clock \(topmarks.co.uk\)](#)
- [Telling the Time - Mathsframe](#)
- [Clock Splat - Math Game - Sheppard Software Educational Games for kids](#)

White Rose Maths – One Minute Maths App:

