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.

Key Instant Recall Facts

Year 3 Autumn A

Know number bonds for each number up to 20.

By the end of this half term, children should be able to mentally recall all pairs of numbers that add together to total 20. They should relate this to previous knowledge of bonds to 10.

e.g. if you know 2 + 8 = 10 then 12 + 8 = 20 or 2 + 18 = 20.

Possible Methods. *- Spot patterns – Look at the pattern that bonds to 10 can help us with knowledge of bonds to 20. Count out 20 objects, partition into 2 groups to learn the pairs of numbers that go together to total 20.*

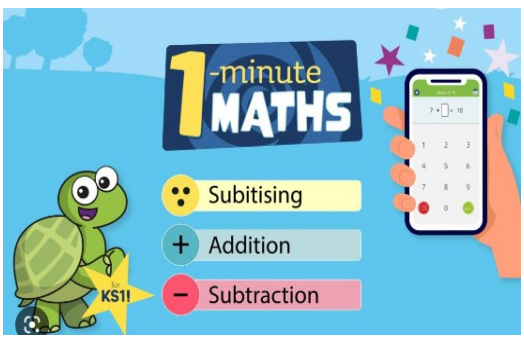
Top Tips: *The secret to success is practising little and often. Use time wisely. Can you practise these KIRFs while walking to school or during a car journey? You do not need to practise them all at once; perhaps you could have a fact of the day. Play 'ping pong'. You say a number, your child says the number back to you that is needed to make 20.*

Use practical resources

- *Use objects from around the house to partition into 2 groups that total 20.*
- *Give a handful of objects, ask how many more to make 20?*
- ***Online games***

- Hit the Button - Quick fire maths practise for 6-11 year olds (topmarks.co.uk) (click on number bonds)
- Number Bonds to 20 - Match up (wordwall.net)
- number bonds to 20 - Find the match (wordwall.net)
- number bonds to 20 - Matching pairs (wordwall.net)

White Rose Maths—One Minute Maths App



Key Instant Recall Facts

Year 3 Autumn B

Know multiplication and division facts for the 4 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 4 times table facts up to 12 x 4 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. 4 x ___ = 24 or ___ ÷ 4 = 3

Possible Methods. *- Songs and chants, there are many times table songs online. Such as*

KS1 Maths: The 4 Times Table with Cyril the Swan - BBC Teach

Spot patterns – Look at the pattern that 4 times table is double of 2 times table.

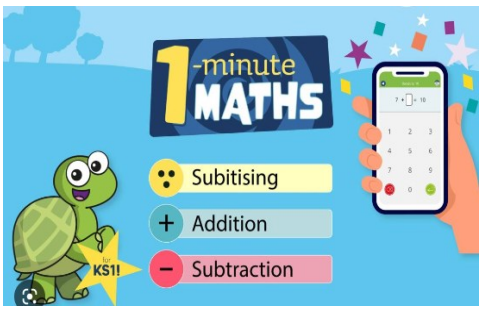
Test the Parent – Your child can make up their own division questions for you e.g. What is 36 divided by 4? They need to be able to multiply to create these questions

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 4 then says the answer back to you at speed.*

Use practical resources

- *Using items around the house put into groups of 4.*
- *Share and divide by 4 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

White Rose Maths—One Minute Maths App



Key Instant Recall Facts

Year 3 Spring A

Know multiplication and division facts for the 8 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 8 times table facts up to 12 x 8 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. 8 x ___ = 64 or ___ ÷ 8 = 5

Possible Methods. *- Songs and chants, there are many times table songs online. Such as*

KS2 Maths: The 8 Times Table with Filbert Fox - BBC Teach

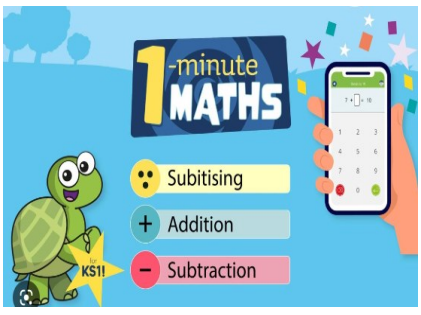
Spot patterns – Look at the pattern that 8 times table is double of 4 times table. OR that you can times the number by 10 then take a double of the number away (this gets tricker with larger numbers but works well up to 8 x 6).

Test the Parent – Your child can make up their own division questions for you e.g. What is 48 divided by 8? 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 8 then says the answer back to you at speed.*

Use practical resources

- *Using items around the house put into groups of 4.*
- *Share and divide by 4 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



White Rose Maths—One Minute Maths App

Key Instant Recall Facts

Year 3 Spring B

Know multiplication and division facts for the 3 and 6 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 3 and 6 times table facts up to 12 x 3 and 12 x 6 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 x ___ = 21 or ___ ÷ 3 = 4

Possible Methods. *- Songs and chants, there are many times table songs online. Such as* KS2 Maths: The 3 Times Table - BBC Teach

Spot patterns – Look at the pattern that 6 times table is double of 3 times table.

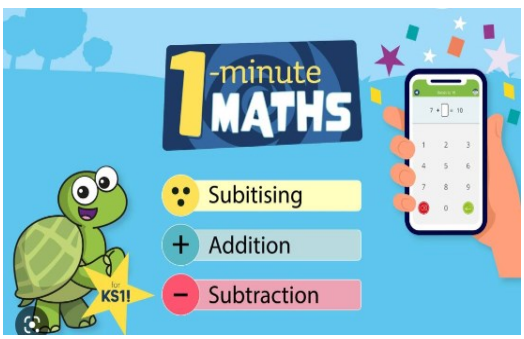
Test the Parent – Your child can make up their own division questions for you e.g. What is 42 divided by 6? They need to be able to multiply to create these questions

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 3 or 6 then says the answer back to you at speed.*

Use practical resources

- *Using items around the house put into groups of 3 or 6.*
- *Share and divide by 3 or 6 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

White Rose Maths—One Minute Maths App



Key Instant Recall Facts

Year 3 Spring B

Count in 50s and 100s.

By the end of this half term, children should be able to count in multiples of 50 and 100 up to 1000. They should be able start at any multiple and continue the sequence e.g. 350, 400, ……

Possible Methods. *- Chants, put actions to the chant to help with memory.*

Spot patterns – Look at the pattern with the numbers, hundreds increase by 100 then add 50 etc.

Make links with 5 times table and 10 times table. If we know 3 x 5 = 15 we should know that 3 x 50 = 150. If we know 4 x 10 = 40 then 4 x 100 = 400.

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 50, your child says back to you the next multiple of 50, then repeat, taking it turns to complete the sequence.*

Use practical resources

- *Counting money 50 pence coins in 50s. Monopoly money in hundreds etc.*
- *Count in multiples of 100 when measuring for cooking, baking etc.*
- ***Online games***
- Counting in 50s - Maths - Learning with BBC Bitesize - BBC Bitesize

Key Instant Recall Facts

Year 3 Summer A

Know all number bonds using multiples of 5, first to 50 then 100 .

By the end of this half term, children should be able to use their knowledge of calculating to the next multiple of 10, together with their knowledge of counting in 5s to know all number bonds to 100 in multiples of 5. Include missing numbers

5 + ___ = 50 15 + ___= 50 25 + ___= 50 35 + ___ = 50 45 + ___= 50

55 + ___= 100 65 + ___ = 100 75 + ___ = 100 85 + ___= 100 95 + ___ = 100

***Method** - Ensure children add on the 5 to bridge to the next multiple of 10 then use their multiples of 10 knowledge to mentally add to 50 or 100. e.g. 45 + 5 to get to 50 then need 50 more to get to 100 therefore 45 + 55 = 100.*

Children should add in multiples of 5 and 10 only, they should not be counting in 1s on fingers.

***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 to you that is needed to equal 50 or 100.*

Play games

- *Play 'Guess my number' giving clues e.g. I'm thinking of a number, when I add 25 to it my answer is 100. What was my number?*
- *Play bonds to 100 with multiples of 5 bingo. Create a grid on paper, add any multiple of 5 numbers to the grid. Bingo caller calls out multiple of 5 numbers. If you have a number on your board that adds to the callers number to equal 100 then cross it out. First to complete their grid is the winner!*
- ***Online games***

Hit the Button - Quick fire maths practise for 6-11 year olds (topmarks.co.uk) (select number bonds)

Key Instant Recall Facts

Year 3 Summer A

Know doubles and halves of all multiples of 10 to 100 .

By the end of this half term, children should have an instant recall of all doubles and halves of multiples of 10 up to 100. E.g. Double 10 = 20, double 40 = 80. .Half of 60 -=30

This is to include halving numbers that need to further halve the final 10.

e.g. half of 30 = 15, half of 50 = 25, half of 70 = 35, half of 90 = 45.

Possible Methods. *- Make links and connections. If we know double 2 is 4 then we know double 20 = 40.*

Make links with 2 times table and dividing by 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 do not need to practise them all at once; perhaps you could have a fact of the day. Play 'ping pong'. Adult says 'Ping,' and the child replies 'Pong.' Then adult says a multiple of 10 number and the child doubles it. Or the adult can say, 'Pong.' The child replies, 'Ping,' and then halves the next number given.*

Use practical resources

- *Doubling money, use 10 pence coins. Ask questions in context, I had £30 and doubled my money. How much money do I have?*
- ***Online games***

Hit the Button - Quick fire maths practise for 6-11 year olds (topmarks.co.uk) (select doubles)

Key Instant Recall Facts

Year 3 Summer B

Mentally add a 3 digit number and ones.

Mentally add a 3 digit number and tens.

By the end of this half term, children should be able to use their knowledge of place value to mentally add ones onto a 3 digit number and tens onto a 3 digit number. They should not need to revert to calculating in a column method.

For example - 345 + 3 = children should recognise that the only digit that would change is the 5. They are needing to mentally calculate 5 + 3 to know the answer of 348.

345 + 20 = children should recognise that the only digit that would change is the 4. They are needing to mentally calculate 4 tens + 2 tens to know the answer of 368.

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.*

Play games

- *Play 'Guess my number' giving clues e.g. I'm thinking of a number, when I add 3 to it my answer is 145. What was my number?*
- *Make up stories to put the maths into context, ask your child to make up stories for you answer too. E.g. 234 ants were marching through the woods, 5 more ants joined them, how many ants altogether?*
- ***Online games***

Maths Choppity Chop - Mathsframe - select option of 3 digit add 1 digit or 3 digit add tens.

Add and subtract numbers mentally, including: a three-digit number and ones; a three-digit number and tens; a three-digit number and hundreds - Mathsframe

Key Instant Recall Facts

Year 3 Summer B

Know the number of weeks in a year and days in a year and leap year.

By the end of this half term, children should we know off by heart, the number of weeks in a year (52) and days in a year (365) and leap year (366).

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, sing songs, make up quizzes etc.*

Useful websites and songs

How many days in a year? 365 Days in a Year Song - YouTube