Year 3 Mathematics

Key Instant Recall Facts

KIRFs

To develop your child's fluency and mental maths skills, we have introduced KIRFs (Key Instant Recall Facts) 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 and measures 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.

For your child to become more efficient in recalling them easily, they need to be practised frequently and for short periods of time. Each half term, children will focus on a Key Instant Recall Fact (KIRF) to practise and learn at school and at home for the half term. They are available on our school website under the maths section and each child will receive a copy to keep at home.

The KIRFs include practical ideas to assist your child in grasping the key facts and contain helpful suggestions of ways in which you could make this learning interesting and relevant. They are not designed to be a time-consuming task and can be practised anywhere – in the car, walking to school, etc.

Regular practice - <u>little and often</u> – 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.

Over their time at primary school, we believe that - if the KIRFs are developed fully - children will be more confident with number work, understand its relevance, and be able to access the curriculum much more easily. They will be able to apply what they have learnt to a wide range of problems that confront us regularly.

Key Instant Recall Facts

Year 3 – 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.**

They should be able to answer these questions in any order, including missing number questions e.g. 8 + ☐ = 20 or 20 - ☐ = 4

Some examples:

30 + 70 = 100	**42 + 58 = 100**
70 + 30 = 100	**58 + 42 = 100**
100 - 70 = 30	**100 - 58 = 42**
100 - 30 = 70	**100 - 42 + 58**
75 + 25 = 100	**27 + 73 = 100**
25 + 75 = 100	**73 + 27 = 100**
100 - 25 = 75	**100 - 73 = 27**
100 - 75 = 25	**100 - 27 = 73**

Key Vocabulary

What do I **add** to 42 to make 100?
What is 100 **subtract** 9?
What is 15 **less than** 100?
How many more than 98 is 100?

Top Tips

These number facts can be learned by rote. 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.

Use what you already know (Buy one get one free) - If your child knows one fact (e.g. 65 + 35 = 100), can they tell you the other three facts in the same fact family?

Use number bonds to 10 - How can your number bonds to 10 help you work out the answer?

Numbots—We pay for all children in KS1 to have a subscription with Numbots. Regular use of this app will support your child to become fluent with all number bond facts.

Key Instant Recall Facts

Year 3 – Autumn 2

I know multiplication and division facts for the 3 times table.

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

They should be able to answer these questions in any order, including missing number questions e.g. 3 x ☐ = 18 or ☐ ÷ 3 = 11

Some examples:

3 x 1 = 3	**1 x 3 = 3**	**3 ÷ 3 = 1**	**3 ÷ 1= 3**
3 x 2 = 6	**2 x 3 = 6**	**6 ÷ 3 = 2**	**6 ÷ 2 = 3**
3 x 3 = 9	**3 x 3 = 9**	**9 ÷ 3 = 3**	**9 ÷ 3 = 3**
3 x 4 = 12	**4 x 3 = 12**	**12 ÷ 3 = 4**	**12 ÷ 4 = 3**
3 x 5 = 15	**5 x 3 = 15**	**15 ÷ 3 = 5**	**15 ÷ 5= 3**
3 x 6 = 18	**6 x 3 = 18**	**18 ÷ 3 = 6**	**18 ÷ 6 = 3**
3 x 7 = 21	**7 x 3 = 21**	**21 ÷ 3 = 7**	**21 ÷ 7 = 3**
3 x 8 = 24	**8 x 3 = 24**	**24 ÷ 3 = 8**	**24 ÷ 8 = 3**
3 x 9 = 27	**9 x 3 = 27**	**27 ÷ 3 = 9**	**27 ÷ 9 = 3**
3 x 10 = 30	**10 x 3 = 30**	**30 ÷ 3 = 10**	**30 ÷ 10= 3**
3 x 11 = 33	**11 x 3 = 33**	**33 ÷ 3 = 11**	**33 ÷ 11 = 3**
3 x 12 = 36	**12 x 3 = 33**	**36 ÷ 3 = 12**	**36 ÷ 12 = 3**

Key Vocabulary

What is 3 multiplied by 7?

What is 6 times 3?

What is 24 divided by 3?

Top Tips

The secret to success is practising little and often.

Use what you already know - If your child knows that 3 x 5 = 15, they can use this to work out a family of facts: 5 x 3 = 15, 15 ÷ 3 = 5, 15 ÷ 5 = 3

Chanting—This is the most effective way for children to memorise these facts. Say the facts in full for best effect i.e. one 3 is 3, two 3's are 6, three 3's are 9...

Use a poster – It is really important that children can see the answers in front of them when they are chanting, so they learn the correct answers. Use this sheet or make a poster which they can refer back to every time they practise.

Play Games—We pay for all children to have a DoodleMaths account. This includes a DoodleTables app for them to practice with. Can you make up games which involve rehearsing these facts?

Key Instant Recall Facts

Year 3 – Spring 1

I can recall facts about durations of time.

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

There are 60 seconds in a minute.

There are 60 minutes in an hour.

There are 24 hours in a day.

There are 7 days in a week.

There are 12 months in a year.

There are 365 days in a year.

There are 366 days in a leap year.

<u>Number of days in each month</u>

January 31	July 31
February 28/29	August 31
March 31	September 30
April 30	October 31
May 31	November 30
June 30	December 31

Children also need to know the order of the months in a year. They should be able to apply these facts to answer questions such as:

What day comes after the 30th April?

What day comes before the 1st February?

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 practice them all at once; perhaps you could have a fact of the day.

<u>Use rhymes and memory games</u> - The rhyme, 'Thirty days has September…' can help children remember which months have 30 days. There are poems describing the months of the year in order too.

<u>Use calendars -</u> If you have a calendar for the new year, your child could be responsible for recording the birthdays of friends and family members in it. Your child could even make their own calendar.

<u>How long is a minute? -</u> Ask your child to sit with their eyes closed for exactly one minute while you time them. Can they guess the length of a minute? How close were they? Rehearse to improve accuracy. Carry out different activities for one minute to get a feel for this length of time. How many times can they jump in 60 seconds?

Key Instant Recall Facts

Year 3 – Spring 2

I know multiplication and division facts for the 4 times table.

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

They should be able to answer these questions in any order, including missing number questions e.g. 4 x ☐ = 16 or ☐ ÷ 4 = 7

Some examples:

1 x 4 = 4	**4 x 1= 4**	**4 ÷ 4 = 1**	**4 ÷ 1= 4**
2 x 4 = 8	**4 x 2= 8**	**8 ÷ 4 = 2**	**8 ÷ 2 = 4**
3 x 4 = 12	**4 x 3 = 12**	**12 ÷ 4 = 3**	**12 ÷ 3 = 4**
4 x 4 = 16	**4 x 4 = 16**	**16 ÷ 4 = 4**	**16 ÷ 4 = 4**
5 x 4 = 20	**4 x 5 = 20**	**20 ÷ 4 = 5**	**20 ÷ 5 = 4**
6 x 4 = 24	**4 x 6 = 24**	**24 ÷ 4 = 6**	**24 ÷ 6 = 4**
7 x 4 = 28	**4 x 7 = 28**	**28 ÷ 4 = 7**	**28 ÷ 7 = 4**
8 x 4 = 32	**4 x 8 = 32**	**32 ÷ 4 = 8**	**32 ÷ 8 = 4**
9 x 4 = 36	**4 x 9 = 36**	**36 ÷ 4 = 9**	**36 ÷ 9 = 4**
10 x 4 = 40	**4 x 10 = 40**	**40 ÷ 4 = 10**	**40 ÷ 10 = 4**
11 x 4 = 44	**4 x 11 = 44**	**44 ÷ 4 = 11**	**44 ÷ 11 = 4**
12 x 4 = 48	**4 x 12 = 48**	**48 ÷ 4 = 12**	**48 ÷ 12 = 4**

Key Vocabulary

What is 4 multiplied by 9?

What is 5 times 4?

What is 28 divided by 4?

Top Tips

The secret to success is practising little and often.

Use what you already know - If your child knows that 5 x 4 = 20, they can use this to work out a family of facts: 4 x 5 = 20, 20 ÷ 4 = 5, 20 ÷ 5 = 4

Chanting—This is the most effective way for children to memorise these facts. Say the facts in full for best effect i.e. one 4 is 4, two 4's are 8, three 4's are 12...

Use a poster – It is really important that children can see the answers in front of them when they are chanting, so they learn the correct answers. Use this sheet or make a poster which they can refer back to every time they practise.

Play Games—We pay for all children to have a DoodleMaths account. This includes a DoodleTables app for them to practice with. Can you make up games which involve rehearsing these facts?

Key Instant Recall Facts

Year 3 – Summer 1

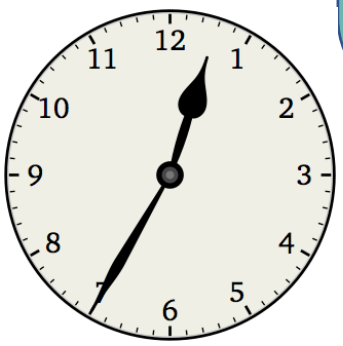
I can tell the time to the nearest 5 minutes.

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

Children need to be able to tell the time using an analogue clock with hands.

This target can be broken down into several steps:

- I can tell the time to the nearest hour
- I can tell the time to the nearest half hour
- I can tell the time to the nearest quarter hour
- I can tell the time to the nearest five minutes



Key Vocabulary

What is 4 multiplied by 9?

What is 5 times 4?

What is 28 divided by 4?

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.

Talk about time - Discuss what time things happen. When does your child wake up? What time do they eat breakfast? Make sure that you have an analogue clock visible in your house or that your child wears a watch with hands. Once your child is confident telling the time, see if you can find more challenging clocks e.g. with Roman numerals or no numbers marked.

Ask your child about time regularly - You could also give your child some responsibility for watching the clock:

'The dinner will need to come out of the oven at twenty-five minutes past five exactly.'

'We need to leave the house at twenty-five to nine.'

Key Instant Recall Facts

Year 3 – Summer 2

I know multiplication and division facts for the 8 times table.

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

They should be able to answer these questions in any order, including missing number questions e.g. 8 x ☐ = 24 or ☐ ÷ 8 = 56

Some examples:

1 x 8 = 8	**8 x 1= 8**	**8 ÷ 8 = 1**	**8 ÷ 1= 8**
2 x 8 = 16	**8 x 2= 16**	**16 ÷ 8 = 2**	**16 ÷ 2 = 8**
3 x 8 = 24	**8 x 3 = 24**	**24 ÷ 8 = 3**	**24 ÷ 3 = 8**
4 x 8 = 32	**8 x 4 = 32**	**32 ÷ 8 = 4**	**32 ÷ 4 = 8**
5 x 8 = 40	**8 x 5 = 40**	**40 ÷ 8 = 5**	**40 ÷ 5 = 8**
6 x 8 = 48	**8 x 6 = 48**	**48 ÷ 8 = 6**	**48 ÷ 6 = 8**
7 x 8 = 56	**8 x 7 = 56**	**56 ÷ 8 = 7**	**56 ÷ 7 = 8**
8 x 8 = 64	**8 x 8 = 64**	**64 ÷ 8 = 8**	**64 ÷ 8 = 8**
9 x 8= 72	**8 x 9 = 72**	**72 ÷ 8 = 9**	**72 ÷ 9 = 8**
10 x 8 = 80	**8 x 10 = 80**	**80 ÷ 8 = 10**	**80 ÷ 10 = 8**
11 x 8 = 88	**8 x 11 = 88**	**88 ÷ 8 = 11**	**88 ÷ 11 = 8**
12 x 8 = 96	**8 x 12 = 96**	**96 ÷ 8 = 12**	**96 ÷ 12 = 8**

Key Vocabulary

What is 8 multiplied by 7?

What is 6 times 8?

What is 72 divided by 8?

Top Tips

The secret to success is practising little and often.

Use what you already know - If your child knows that 5 x 8 = 40, they can use this to work out a family of facts: 8 x 5 = 40, 40 ÷ 8 = 5, 40 ÷ 5 = 8

Chanting—This is the most effective way for children to memorise these facts. Say the facts in full for best effect i.e. one 8 is 8, two 8's are 16, three 8's are 24...

Use a poster – It is really important that children can see the answers in front of them when they are chanting, so they learn the correct answers. Use this sheet or make a poster which they can refer back to every time they practise.

Play Games—We pay for all children to have a DoodleMaths account. This includes a DoodleTables app for them to practice with. Can you make up games which involve rehearsing these facts?