Key Instant Recall Facts (KIRFs)

Dear Parents and Carers,

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. 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 home for the half term. They will also be 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 - 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.

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.

Should you have any further questions about KIRFs please do not hesitate to speak to your child's class teacher or Maths Lead, Mrs Brailsford.

Mrs Brailsford
Deputy Head teacher

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 + ◯ = 5 or 4 - ◯ = 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 1 – Spring 1

I know doubles and halves of numbers to 10.

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

0 + 0 = 0	½ of 0 = 0
1 + 1 = 2	½ of 2 = 1
2 + 2 = 4	½ of 4 = 2
3 + 3 = 6	½ of 6 = 3
4 + 4 = 8	½ of 8 = 4
5 + 5 = 10	½ of 10 = 5
6 + 6 = 12	
7 + 7 = 14	
8 + 8 = 16	
9 + 9 = 18	
10 + 10 = 20	

Key Vocabulary

What is **double** 9?

What is **half** of 6?

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.

Ping Pong – In this game, the parent says, "Ping," and the child replies, "Pong." Then the parent says a number and the child doubles it. For a harder version, the adult can say, "Pong." The child replies, "Ping," and then halves the next number given.

Practise online – Go to www.conkermaths.com and see how many questions you can answer in just 90 seconds.

Key Instant Recall Facts

Year 1 – Spring 2

I know number bonds to 10.

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

0 + 10 = 10	2 + 8 = 10	4 + 6 = 10
10 + 0 = 10	8 + 2 = 10	6 + 4 = 10
10 – 10 = 0	10 – 8 = 2	10 – 6 = 4
10 – 0 = 10	10 – 2 = 8	10 – 4 = 6
1 + 9 = 10	3 + 7 = 10	5 + 5 = 10
9 + 1 = 10	7 + 3 = 10	10 – 5 = 5
10 – 9 = 1	10 – 7 = 3	
10 – 1 = 9	10 – 3 = 7	

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. 6 + ◯ = 10 or 10 – ◯ = 3.

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 two 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 1 – Summer 1

I can tell the time.

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 a 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.

Key Vocabulary

Twelve **o'clock**

Half past two

Top Tips

The secret to success is practising **little** and **often**. If you would like more ideas, please speak to your child's teacher.

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.

Play "What's the time Mr Wolf?" – You could also give your child some responsibility for watching the clock :

Read books about time

Key Instant Recall Facts

Year 1 – Summer 2

I know number bonds for each number to 10.

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

0 + 7 = 7	0 + 8 = 8	0 + 9 = 9	0 + 10 = 10
1 + 6 = 7	1 + 7 = 8	1 + 8 = 9	1 + 9 = 10
2 + 5 = 7	2 + 6 = 8	2 + 7 = 9	2 + 8 = 10
3 + 4 = 7	3 + 5 = 8	3 + 6 = 9	3 + 7 = 10
4 + 3 = 7	4 + 4 = 8	4 + 5 = 9	4 + 6 = 10
5 + 2 = 7	5 + 3 = 8	5 + 4 = 9	5 + 5 = 10
6 + 2 = 8	6 + 2 = 8	6 + 3 = 9	6 + 4 = 10
7 + 1 = 8	7 + 1 = 8	7 + 2 = 9	7 + 3 = 10
8 + 0 = 8	8 + 0 = 8	8 + 1 = 9	8 + 2 = 10
		9 + 0 = 9	9 + 1 = 10
			10 + 0 = 10

Key Vocabulary

What do I **add** to 5 to make 10?

What is 10 **take away** 6?

What is 3 **less than** 10?

How many more than 2 is 10?

They should be able to answer these questions in any order, including missing number questions e.g. 1 + ◯ = 10 or 9 – ◯ = 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.

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 + ◯ = 20 or 20 – ◯ = 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 2 – Autumn 2

I know the multiplication and division facts for the 2 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**.

2 × 1 = 2	2 ÷ 2 = 1
2 × 2 = 4	4 ÷ 2 = 2
2 × 3 = 6	6 ÷ 2 = 3
2 × 4 = 8	8 ÷ 2 = 4
2 × 5 = 10	10 ÷ 2 = 5
2 × 6 = 12	12 ÷ 2 = 6
2 × 7 = 14	14 ÷ 2 = 7
2 × 8 = 16	16 ÷ 2 = 8
2 × 9 = 18	18 ÷ 2 = 9
2 × 10 = 20	20 ÷ 2 = 10
2 × 11 = 22	22 ÷ 2 = 11
2 × 12 = 24	24 ÷ 2 = 12

Key Vocabulary

What is 2 **multiplied by** 7?

What is 2 **times** 9?

What is 12 **divided by** 2?

They should be able to answer these questions in any order, including missing number questions e.g. 2 × ◯ = 8 or ◯ ÷ 2 = 6.

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.

Songs and Chants – You can buy Times Tables CDs or find multiplication songs and chants online. If your child creates their own song, this can make the times tables even more memorable.

Use what you already know – If your child knows that 2 × 5 = 10, they can use this fact to work out that 2 × 6 = 12.

Test the Parent – Your child can make up their own tricky division questions for you e.g. *What is 18 divided by 2?* They need to be able to multiply to create these questions.

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

Key Instant Recall Facts

Year 2 – Spring 1

I know doubles and halves of 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**.

0 + 0 = 0	½ of 0 = 0	
1 + 1 = 2	½ of 2 = 1	11 + 11 = 22
2 + 2 = 4	½ of 4 = 2	12 + 12 = 24
3 + 3 = 6	½ of 6 = 3	13 + 13 = 26
4 + 4 = 8	½ of 8 = 4	14 + 14 = 28
5 + 5 = 10	½ of 10 = 5	15 + 15 = 30
6 + 6 = 12	½ of 12 = 6	16 + 16 = 32
7 + 7 = 14	½ of 14 = 7	17 + 17 = 34
8 + 8 = 16	½ of 16 = 8	18 + 18 = 36
9 + 9 = 18	½ of 18 = 9	19 + 19 = 38
10 + 10 = 20	½ of 20 = 10	20 + 20 = 40

Key Vocabulary

What is **double** 9?

What is **half** of 14?

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 – Encourage your child to find the connection between the 2 times table and double facts.

Ping Pong – In this game, the parent says, "Ping," and the child replies, "Pong." Then the parent says a number and the child doubles it. For a harder version, the adult can say, "Pong." The child replies, "Ping," and then halves the next number given.

Practise online – Go to www.conkermaths.com and see how many questions you can answer in just 90 seconds.

Key Instant Recall Facts

Year 2 – Spring 2

I know the multiplication and division facts for the 10 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**.

10 × 1 = 10	10 ÷ 10 = 1
10 × 2 = 20	20 ÷ 10 = 2
10 × 3 = 30	30 ÷ 10 = 3
10 × 4 = 40	40 ÷ 10 = 4
10 × 5 = 50	50 ÷ 10 = 5
10 × 6 = 60	60 ÷ 10 = 6
10 × 7 = 70	70 ÷ 10 = 7
10 × 8 = 80	80 ÷ 10 = 8
10 × 9 = 90	90 ÷ 10 = 9
10 × 10 = 100	100 ÷ 10 = 10
10 × 11 = 110	110 ÷ 10 = 11
10 × 12 = 120	120 ÷ 10 = 12

Key Vocabulary

What is 10 **multiplied by** 3?

What is 10 **times** 9?

What is 70 **divided by** 10?

They should be able to answer these questions in any order, including missing number questions e.g. 10 × ◯ = 80 or ◯ ÷ 10 = 6.

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.

Pronunciation – Make sure that your child is pronouncing the numbers correctly and not getting confused between thir**teen** and thir**ty**.

Songs and Chants – You can buy Times Tables CDs or find multiplication songs and chants online. If your child creates their own song, this can make the times tables even more memorable.

Test the Parent – Your child can make up their own tricky division questions for you e.g. *What is 70 divided by 7?* They need to be able to multiply to create these questions.

Apply these facts to real life situations – How many toes are in your house? What other multiplication and division questions can your child make up?

Key Instant Recall Facts

Year 2 – Summer 1

I can tell the time.

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 a 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

Twelve **o'clock**

Half past two

Quarter past three

Quarter to nine

Five **past** one

Twenty-five **to** ten

Top Tips

The secret to success is practising **little** and **often**. If you would like more ideas, please speak to your child's teacher.

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.

Ask your child the time regularly – You could also give your child some responsibility for watching the clock :
"The cakes need to come out of the oven at quarter past four."
"We need to leave the house at half past eight."

Key Instant Recall Facts

Year 2 – Summer 2

I know the multiplication and division facts for the 5 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**.

5 × 1 = 5	5 ÷ 5 = 1
5 × 2 = 10	10 ÷ 5 = 2
5 × 3 = 15	15 ÷ 5 = 3
5 × 4 = 20	20 ÷ 5 = 4
5 × 5 = 25	25 ÷ 5 = 5
5 × 6 = 30	30 ÷ 5 = 6
5 × 7 = 35	35 ÷ 5 = 7
5 × 8 = 40	40 ÷ 5 = 8
5 × 9 = 45	45 ÷ 5 = 9
5 × 10 = 50	50 ÷ 5 = 10
5 × 11 = 55	55 ÷ 5 = 11
5 × 12 = 60	60 ÷ 5 = 12

Key Vocabulary

What is 5 **multiplied by** 7?

What is 5 **times** 9?

What is 60 **divided by** 5?

They should be able to answer these questions in any order, including missing number questions e.g. 5 × ◯ = 40 or ◯ ÷ 5 = 9.

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.

Songs and Chants – You can buy Times Tables CDs or find multiplication songs and chants online. If your child creates their own song, this can make the times tables even more memorable.

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 tricky division questions for you e.g. *What is 45 divided by 5?* They need to be able to multiply to create these questions.

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

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 3 – Autumn 2

I know the 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**.

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

Key Vocabulary

What is 3 **multiplied by** 8?

What is 8 **times** 3?

What is 24 **divided by** 3?

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

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.

Songs and Chants – You can buy Times Tables CDs or find multiplication songs and chants online. If your child creates their own song, this can make the times tables even more memorable.

Buy one get three free – If your child knows one fact (e.g. 3 × 5 = 15), can they tell you the other three facts in the same fact family?

Warning! – When creating fact families, children sometimes get confused by the order of the numbers in the division number sentence. It is tempting to say that the biggest number goes first, but it is more helpful to say that the answer to the multiplication goes first, as this will help your child more in later years when they study fractions, decimals and algebra. E.g. 3 × 12 = 36. The answer to the multiplication is 36, so 36 ÷ 3 = 12 and 36 ÷ 12 = 3

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.

Number of days in each month

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 30th April?

What day comes before 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 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 rhymes and memory games – The rhyme, *Thirty days hath September*, can help children remember which months have 30 days. There are poems describing the months of the year in order.

Use calendars – 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.

How long is a minute? – 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? Carry out different activities for one minute. How many times can they jump in sixty seconds?

Key Instant Recall Facts

Year 3 – Spring 2

I know the 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**.

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

Key Vocabulary

What is 4 **multiplied by** 6?

What is 8 **times** 4?

What is 24 **divided by** 4?

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

What do you already know? – Your child will already know many of these facts from the 2, 3, 5 and 10 times tables.

Double and double again – Multiplying a number by 4 is the same as doubling and doubling again. Double 6 is 12 and double 12 is 24, so 6 × 4 = 24.

Buy one get three free – If your child knows one fact (e.g. 12 × 4 = 48), can they tell you the other three facts in the same fact family?

Key Instant Recall Facts

Year 3 – Summer 1

I can tell the time.

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 a 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.

I can tell the time to the nearest minute.

Key Vocabulary

Twelve **o'clock**

Half past two

Quarter past three

Quarter to nine

Five **past** one

Twenty-five **to** ten

Top Tips

The secret to success is practising **little** and **often**. Use time wisely. If you would like more ideas, please speak to your child's teacher.

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 the time regularly – You could also give your child some responsibility for watching the clock :
"The cakes need to come out of the oven at twenty-two minutes past four exactly."
"We need to leave the house at twenty-five to nine."

Key Instant Recall Facts

Year 3 – Summer 2

I know the 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**.

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

Key Vocabulary

What is 8 **multiplied by** 6?

What is 8 **times** 8?

What is 24 **divided by** 8?

They should be able to answer these questions in any order, including missing number questions e.g. 8 × ◯ = 16 or ◯ ÷ 8 = 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.

Songs and Chants – You can buy Times Tables CDs or find multiplication songs and chants online. If your child creates their own song, this can make the times tables even more memorable.

Double your fours – Multiplying a number by 8 is the same as multiply by 4 and then doubling the answer. 8 × 4 = 32 and double 32 is 64, so 8 × 8 = 64.

Five six seven eight – fifty-six is seven times eight (56 = 7 × 8).

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

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 + ◯ = 100 or 100 – ◯ = 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 4 – Autumn 2

I know the multiplication and division facts for the 6 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**.

6 × 1 = 6	1 × 6 = 6	6 ÷ 6 = 1	6 ÷ 1 = 6
6 × 2 = 12	2 × 6 = 12	12 ÷ 6 = 2	12 ÷ 2 = 6
6 × 3 = 18	3 × 6 = 18	18 ÷ 6 = 3	18 ÷ 3 = 6
6 × 4 = 24	4 × 6 = 24	24 ÷ 6 = 4	24 ÷ 4 = 6
6 × 5 = 30	5 × 6 = 30	30 ÷ 6 = 5	30 ÷ 5 = 6
6 × 6 = 36	6 × 6 = 36	36 ÷ 6 = 6	36 ÷ 6 = 6
6 × 7 = 42	7 × 6 = 42	42 ÷ 6 = 7	42 ÷ 7 = 6
6 × 8 = 48	8 × 6 = 48	48 ÷ 6 = 8	48 ÷ 8 = 6
6 × 9 = 54	9 × 6 = 54	54 ÷ 6 = 9	54 ÷ 9 = 6
6 × 10 = 60	10 × 6 = 60	60 ÷ 6 = 10	60 ÷ 10 = 6
6 × 11 = 66	11 × 6 = 66	66 ÷ 6 = 11	66 ÷ 11 = 6
6 × 12 = 72	12 × 6 = 72	72 ÷ 6 = 12	72 ÷ 12 = 6

Key Vocabulary

What is 8 **multiplied by** 6?

What is 6 **times** 8?

What is 24 **divided by** 6?

They should be able to answer these questions in any order, including missing number questions e.g. $6 \times \square = 72$ or $\square \div 6 = 7$.

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.

Songs and Chants – You can buy Times Tables CDs or find multiplication songs and chants online. If your child creates their own song, this can make the times tables even more memorable.

Double your threes – Multiplying a number by 6 is the same as multiplying by 3 and then doubling the answer. 7 × 3 = 21 and double 21 is 42, so 7 × 6 = 42.

Buy one get three free – If your child knows one fact (e.g. 3 × 6 = 18), can they tell you the other three facts in the same fact family?

Warning! – When creating fact families, children sometimes get confused by the order of the numbers in the division number sentence. It is tempting to say that the biggest number goes first, but it is more helpful to say that the answer to the multiplication goes first, as this will help your child more in later years when they study fractions, decimals and algebra.
E.g. 6 × 12 = 72. The answer to the multiplication is 72, so 72 ÷ 6 = 12 and 72 ÷ 12 = 6

Key Instant Recall Facts

Year 4 – Spring 1

I know the multiplication and division facts for the 9 and 11 times tables.

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

9 × 1 = 9	9 ÷ 9 = 1	11 × 1 = 11	11 ÷ 11 = 1
9 × 2 = 18	18 ÷ 9 = 2	11 × 2 = 22	22 ÷ 11 = 2
9 × 3 = 27	27 ÷ 9 = 3	11 × 3 = 33	33 ÷ 11 = 3
9 × 4 = 36	36 ÷ 9 = 4	11 × 4 = 44	44 ÷ 11 = 4
9 × 5 = 45	45 ÷ 9 = 5	11 × 5 = 55	55 ÷ 11 = 5
9 × 6 = 54	54 ÷ 9 = 6	11 × 6 = 66	66 ÷ 11 = 6
9 × 7 = 63	63 ÷ 9 = 7	11 × 7 = 77	77 ÷ 11 = 7
9 × 8 = 72	72 ÷ 9 = 8	11 × 8 = 88	88 ÷ 11 = 8
9 × 9 = 81	81 ÷ 9 = 9	11 × 9 = 99	99 ÷ 11 = 9
9 × 10 = 90	90 ÷ 9 = 10	11×10 = 110	110÷11 = 10
9 × 11 = 99	99 ÷ 9 = 11	11×11 = 121	121÷11 = 11
9 × 12 = 108	108 ÷ 9 = 12	11×12 = 132	132÷11 = 12

Key Vocabulary

What is 8 **multiplied by** 6?

What is 6 **times** 8?

What is 24 **divided by** 6?

They should be able to answer these questions in any order, including missing number questions e.g. 9 × ◯ = 54 or ◯ ÷ 9 = 11.

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.

Look for patterns – These times tables are full of patterns for your child to find. How many can they spot?

Use your ten times table – Multiply a number by 10 and subtract the original number (e.g. 7 × 10 – 7 = 70 – 7 = 63). What do you notice?
What happens if you add your original number instead?
(e.g. 7 × 10 + 7 = 70 + 7 = 77)

What do you already know? – Your child will already know many of these facts from the 2, 3, 4, 5, 6, 8 and 10 times tables. It might be worth practising these again!

Key Instant Recall Facts

Year 4 – Spring 2

I can recognise decimal equivalents of fractions.

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

$\frac{1}{2} = 0.5$

$\frac{1}{4} = 0.25$

$\frac{3}{4} = 0.75$

$\frac{1}{10} = 0.1$

$\frac{2}{10} = 0.2$

$\frac{5}{10} = 0.5$

$\frac{6}{10} = 0.6$

$\frac{9}{10} = 0.9$

$\frac{1}{100} = 0.01$

$\frac{7}{100} = 0.07$

$\frac{21}{100} = 0.21$

$\frac{75}{100} = 0.75$

$\frac{99}{100} = 0.99$

Key Vocabulary

How many **tenths** is 0.8?

How many **hundredths** is 0.12?

Write 0.75 as a **fraction**?

Write ¼ as a **decimal**?

Children should be able to convert between decimals and fractions for ½, ¼, ¾ and any number of tenths and hundredths.

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: start with tenths before moving on to hundredths. If you would like more ideas, please speak to your child's teacher.

Play games - Make some cards with pairs of equivalent fractions and decimals. Use these to play the memory game or snap. Or make your own dominoes with fractions on one side and decimals on the other.

Key Instant Recall Facts

Year 4 – Summer 1

I know the multiplication and division facts for the 7 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**.

7 × 1 = 7	1 × 7 = 7	7 ÷ 7 = 1	7 ÷ 1 = 7
7 × 2 = 14	2 × 7 = 14	14 ÷ 7 = 2	14 ÷ 2 = 7
7 × 3 = 21	3 × 7 = 21	21 ÷ 7 = 3	21 ÷ 3 = 7
7 × 4 = 28	4 × 7 = 28	28 ÷ 7 = 4	28 ÷ 4 = 7
7 × 5 = 35	5 × 7 = 35	35 ÷ 7 = 5	35 ÷ 5 = 7
7 × 6 = 42	6 × 7 = 42	42 ÷ 7 = 6	42 ÷ 6 = 7
7 × 7 = 49	7 × 7 = 49	49 ÷ 7 = 7	49 ÷ 7 = 7
7 × 8 = 56	8 × 7 = 56	56 ÷ 7 = 8	56 ÷ 8 = 7
7 × 9 = 63	9 × 7 = 63	63 ÷ 7 = 9	63 ÷ 9 = 7
7 × 10 = 70	10 × 7 = 70	70 ÷ 7 = 10	70 ÷ 10 = 7
7 × 11 = 77	11 × 7 = 77	77 ÷ 7 = 11	77 ÷ 11 = 7
7 × 12 = 84	12 × 7 = 84	84 ÷ 7 = 12	84 ÷ 12 =7

Key Vocabulary

What is 7 **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 × ◯ = 28 or ◯ ÷ 6 = 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.

Songs and Chants – You can buy Times Tables CDs or find multiplication songs and chants online. If your child creates their own song, this can make the times tables even more memorable.

Order of difficulty – Ask your child to order these facts from the easiest to the most challenging. Can they explain why some facts are easier to remember? Then focus on practising the most challenging facts.

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

Key Instant Recall Facts

Year 4 – Summer 2

I can multiply and divide single-digit numbers by 10 and 100.

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

7 × 10 = 70	30 × 10 = 300	0.8 × 10 = 8
10 × 7 = 70	10 × 30 = 300	10 × 0.8 = 8
70 ÷ 7 = 10	300 ÷ 30 = 10	8 ÷ 0.8 = 10
70 ÷ 10 = 7	300 ÷ 10 = 30	8 ÷ 10 = 0.8
6 × 100 = 600	40 × 100 = 4000	0.2 × 10 = 2
100 × 6 = 600	100 × 40 = 4000	10 × 0.2 = 2
600 ÷ 6 = 100	4000 ÷ 40 = 100	2 ÷ 0.2 = 10
600 ÷ 100 = 6	4000 ÷ 100 = 40	2 ÷ 10 = 0.2

Key Vocabulary

What is 5 **multiplied by** 10?

What is 10 **times** 0.9?

What is 700 **divided by** 70?

hundreds, tens, units

tenths, hundredths

These are just examples of the facts for this term. Children should be able to answer these questions in any order, including missing number questions e.g. 10 × ◯ = 5 or ◯ ÷ 10 = 60.

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.

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 + ◯ = 10 or 7.2 + ◯ = 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 5 – Autumn 2

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**.

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 $\bigcirc \div 6 = 7$.

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.

Key Instant Recall Facts

Year 5 – Spring 1

I can recall metric conversions.

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

1 kilogram = 1000 grams

1 kilometre = 1000 metres
1 metre = 100 centimetres
1 metre = 1000 millimetres
1 centimetre = 10 millimetres

1 litre = 1000 millilitres

They should also be able to apply these facts to answer questions.

e.g. How many metres in 1½ km?

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.

Look at the prefixes – Can your child work out the meanings of *kilo-*, *centi-* and *milli-*? What other words begin with these prefixes?

Be practical – Do some baking and convert the measurements in the recipe.

How far? – Calculate some distances using unusual measurements. How tall is your child in mm? How far away is London in metres?

Key Instant Recall Facts

Year 5 – Spring 2

I can identify prime numbers up 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**.

A prime number is a number with no factors other than itself and one.

The following numbers are prime numbers:

2, 3, 5, 7, 11, 13, 17, 19

Key Vocabulary
prime number
composite number
factor
multiple

A composite number is divisible by a number other than 1 or itself.

The following numbers are composite numbers:

4, 6, 8, 9, 10, 12, 14, 15, 16, 18, 20

Children should be able to explain how they know that a number is composite.

E.g. 15 is composite because it is a multiple of 3 and 5.

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.

It's really important that your child uses mathematical vocabulary accurately. Choose a number between 2 and 20. How many correct statements can your child make about this number using the vocabulary above?

Make a set of cards for the numbers from 2 to 20. How quickly can your child sort these into prime and composite numbers? How many even prime numbers can they find? How many odd composite numbers?

Key Instant Recall Facts

Year 5 – Summer 1

I can recall square numbers up to 12^2 and their square roots.

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

$1^2 = 1 \times 1 = 1$
$2^2 = 2 \times 2 = 4$
$3^2 = 3 \times 3 = 9$
$4^2 = 4 \times 4 = 16$
$5^2 = 5 \times 5 = 25$
$6^2 = 6 \times 6 = 36$
$7^2 = 7 \times 7 = 49$
$8^2 = 8 \times 8 = 64$
$9^2 = 9 \times 9 = 81$
$10^2 = 10 \times 10 = 100$
$11^2 = 11 \times 11 = 121$
$12^2 = 12 \times 12 = 144$

$\sqrt{1} = 1$
$\sqrt{4} = 2$
$\sqrt{9} = 3$
$\sqrt{16} = 4$
$\sqrt{25} = 5$
$\sqrt{36} = 6$
$\sqrt{49} = 7$
$\sqrt{64} = 8$
$\sqrt{81} = 9$
$\sqrt{100} = 10$
$\sqrt{121} = 11$
$\sqrt{144} = 12$

Key Vocabulary

What is 8 **squared**?

What is 7 **multiplied by itself**?

What is the **square root** of 144?

Is 81 a **square number**?

Children should also be able to recognise whether a number below 150 is a square number or not.

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.

Cycling Squares – At http://nrich.maths.org/1151 there is a challenge involving square numbers. Can you complete the challenge and then create your own examples?

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

Key Instant Recall Facts

Year 5 – Summer 2

I can find factor pairs of a number.

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

Children should now know all multiplication and division facts up to 12 × 12. When given a number in one of these times tables, they should be able to state a factor pair which multiply to make this number. Below are some examples:

24 = 4 × 6	42 = 6 × 7
24 = 8 × 3	25 = 5 × 5
56 = 7 × 8	84 = 7 × 12
54 = 9 × 6	15 = 5 × 3

Key Vocabulary

Can you find a **factor** of 28?

Find two numbers whose **product** is 20.

I know that 6 is a factor of 72 because 6 multiplied by 12 equals 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.

Play games - There is an activity at www.conkermaths.org to practise finding factor pairs

Think of the question – One player thinks of a times table question (e.g. 4 × 12) and states the answer. The other player has to guess the original question.

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

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**.

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 × ◯ = 28 or ◯ ÷ 6 = 7.

Children who have already mastered their times tables should apply this knowledge to answer questions including decimals e.g. 0.7 × ◯ = 4.2 or ◯ ÷ 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.

Key Instant Recall Facts

Year 6 – Autumn 2

I can identify common factors of a pair of numbers.

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

The factors of a number are all numbers which divide it with no remainder.

E.g. the factors of 24 are 1, 2, 3, 4, 6, 8, 12, and 24. The factors of 56 are 1, 2, 4, 7, 8, 14, 28 and 56.

The common factors of two numbers are the factors they share.

E.g. the common factors of 24 and 56 are 1, 2, 4 and 8.

The greatest common factor of 24 and 56 is 8.

Key Vocabulary

- factor
- common factor
- multiple
- greatest common factor

Children should be able to explain how they know that a number is a common factor.

E.g. 8 is a common factor of 24 and 56 because $24 = 8 \times 3$ and $56 = 8 \times 7$.

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? If your child is not yet confident with identifying factor pairs of a number, you may want to refer to the Year 5 Summer 2 sheet to practise this first. If you would like more ideas, please speak to your child's teacher.

There are many online games to practise finding the greatest common factor, for example: http://www.fun4thebrain.com/beyondfacts/gcfsketch.html

Choose two numbers. Take it in turns to name factors. Who can find the most?

Key Instant Recall Facts

Year 6 – Spring 1

I can convert between decimals, fractions and percentages.

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

$\frac{1}{2} = 0.5$

$\frac{1}{4} = 0.25$

$\frac{3}{4} = 0.75$

$\frac{1}{10} = 0.1$

$\frac{1}{5} = 0.2$

$\frac{3}{5} = 0.6$

$\frac{9}{10} = 0.9$

$\frac{1}{100} = 0.01$

$\frac{7}{100} = 0.07$

$\frac{21}{100} = 0.21$

$\frac{75}{100} = 0.75$

$\frac{99}{100} = 0.99$

Key Vocabulary

How many **tenths** is 0.8?

How many **hundredths** is 0.12?

Write 0.75 as a **fraction**?

Write ¼ as a **decimal**?

Children should be able to convert between decimals and fractions for ½, ¼, ¾ and any number of tenths and hundredths.

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: start with tenths before moving on to hundredths. If you would like more ideas, please speak to your child's teacher.

Play games - Make some cards with pairs of equivalent fractions and decimals. Use these to play the memory game or snap. Or make your own dominoes with fractions on one side and decimals on the other.

Key Instant Recall Facts

Year 6 – Spring 2

I can identify prime numbers up to 50.

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

A prime number is a number with no factors other than itself and one.

The following numbers are prime numbers:

2, 3, 5, 7, 11, 13, 17, 19, 23,

29, 31, 37, 41, 43, 47

A composite number is divisible by a number other than 1 or itself.

The following numbers are composite numbers:

4, 6, 8, 9, 10, 12, 14, 15, 16, 18, 20,

22, 24, 25, 26, 27, 28, 30, 32, 34, 35, 36,

38, 39, 40, 42, 44, 45, 46, 48, 49, 50

Key Vocabulary

prime number

composite number

factor

multiple

Children should be able to explain how they know that a number is composite.

E.g. 39 is composite because it is a multiple of 3 and 13.

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.

It's really important that your child uses mathematical vocabulary accurately. Choose a number between 2 and 50. How many correct statements can your child make about this number using the vocabulary above?

Make a set of cards for the numbers from 2 to 50. How quickly can your child sort these into prime and composite numbers? How many even prime numbers can they find? How many odd composite numbers?