KIRF's

Key Instant Recall Facts-

Guidance for parents

St Benedict's RC School

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Introduction

To help develop children's fluency in mathematics, we ask them to learn Key Instant Recall Facts each half term. We expect children to practise their KIRFs at least 3 times a week.

We have created these lists of KIRFs to align with the mathematics curriculum. They are intended to be challenging however they have been planned out so that children will have been taught the necessary maths in lessons beforehand.

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.

If you would like more ideas, please speak to your child's teacher.

General hints for parents

Encourage children to talk about their calculation strategies. Ask questions such as,

'How did you work that out?'

'Can you think of any other ways?'

'What if you started with…….?'

Don't worry if some methods seem longwinded or unfamiliar to you. Building confidence in mathematics is crucial, so be pleased with their efforts and always encourage with praise. Make sure these practise sessions are enjoyable! If your child is not in the mood, it is the wrong time to be practising.

With younger children always have apparatus… toys / small objects / coins etc. available, so that they can work at a very practical level and check their mental calculations with real materials. Older children may choose to support their thinking with rough jottings. Ultimately, we are encouraging children to ask themselves 'Can I do this in my head?' but they should always work at a level in which they feel secure. To rush the removal of or discourage support materials would slow down the development of their thinking in the longer term.

The best possible way to develop a real understanding of time is to practise regularly, referring to an analogue clock. Children regularly ask questions about time, 'What time is it?' 'When will dinner be ready?' etc. Referring them to the clock regularly will really help their confidence and understanding. Begin by referring to the hour- Where is the little hand pointing? This can progress to: 'Where is the hour hand pointing?' These small steps and subtle changes in language help under-pin understanding before bringing in the minute hand.

Remember you can always ask your child's teacher for further support.

KEY INSTANT RECALL FACTS

EYFS- AUTUMN 1

I can say the numbers from 0 to 10 and back from 10 to 0, in order

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

In order:

0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

And back again

10, 9, 8, 7, 6, 5, 4, 3, 2, 1, 0

Key Vocabulary

Zero
One
Two
Three
Four
Five
Six
Seven
Eight
Nine
Ten

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. If you would like more ideas, please speak to your child's teacher.

Use practical resources, for example –

- Counting objects around the home, making piles of 0, 1, 2, 3, 4 and 5, and then counting them in order to 5 and back… use sweets, lego, fruit, stones, leaves etc
- Looking for numbers up to 5 around the home and when you are out and about…..can they count on or back from that number?
- Singing number songs where the numbers are going backwards, e.g Five little speckled frogs, Five little monkeys jumping on the bed etc.

Online activites-

http://www.bbc.co.uk/schoolradio/subjects/mathematics/countingsongs
http://www.topmarks.co.uk/learning-to-count/ladybird-spots

KEY INSTANT RECALL FACTS

EYFS- AUTUMN 2

I can partition numbers, to 5, into two groups

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

5 + 0 = 5

1 + 4 = 5

2 + 3 = 5

0 + 5 = 5

4 + 1 = 4

3 + 2 =5

Key Vocabulary

____ and _____ make _____

Zero and five make five.
One and four make five.
Two and three make five.

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. If you would like more ideas, please speak to your child's teacher.

Use practical resources – Using items around the house to find different ways of making 5, e.g one blue teddy and four red teddies. One and four make five.

Making up stories with items around the home, e.g there are 2 cars in the car park and 3 more cars arrive, how many cars altogether? Two and three make five.

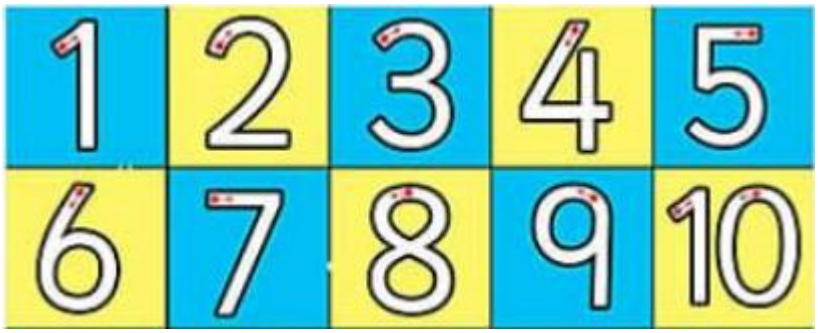
Asking questions during daily routines, e.g you have 1 sausage on your plate and I have 4 sausages on my plate, how many sausages altogether? One and four make five.

KEY INSTANT RECALL FACTS

EYFS- SPRING 1

I can count, read and write 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.**



Key Vocabulary

Zero
One
Two
Three
Four
Five
Six
Seven
Eight
Nine
Ten

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. If you would like more ideas, please speak to your child's teacher.

Use practical resources – Counting objects around the home finding methods of counting accurately, e.g moving each object as it is counted…….use sweets, lego, fruit, stones, leaves etc

Looking for numbers up to 10 around the home and when you are out and about.

Count objects around the home and then write the correct numeral to match the quantity counted. Repeat with other numbers. Discuss which number is the biggest/smallest or is more/less than the other. How do you know?

KEY INSTANT RECALL FACTS

EYFS- SPRING 2

I can partition numbers, to 10, into two groups

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

Key Vocabulary
_____ and _____ make _____

Zero and ten make ten.
One and nine make ten.
Two and eight make ten.
Three and seven make ten.
Four and six make ten.
Five and five make ten.

Use practical resources – Using items around the house to find different ways of making 10, e.g one blue teddy and nine red teddies. One and nine make ten.
Making up stories with items around the home, e.g there are 2 cars in the car park and 8 more cars arrive, how many cars altogether? Two and eight make ten.

Asking questions during daily routines, e.g you have 4 sausages on your plate and I have 6 sausages on my plate, how many sausages altogether? Four and six make ten.

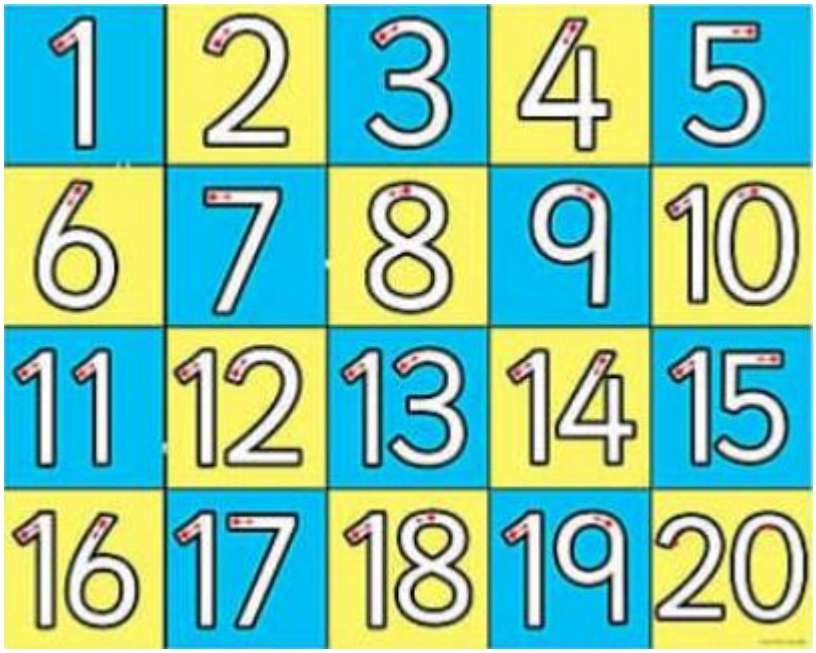
Jack Hartmann Number bonds to 10 singing and moving you tube clip!
https://www.youtube.com/watch?v=lD9tjBUiXs0 Number bonds to 10
https://www.youtube.com/watch?v=ch7KzI3n2Zk Number pairs to 10

KEY INSTANT RECALL FACTS

EYFS- SUMMER 1

I can count, read and write 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.**



Key Vocabulary

Eleven
Twelve
Thirteen
Fourteen
Fifteen
Sixteen
Seventeen
Eighteen
Nineteen
Twenty

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. If you would like more ideas, please speak to your child's teacher.

Use practical resources – Counting objects around the home finding methods of counting accurately, e.g moving each object as it is counted…….use sweets, lego, fruit, stones, leaves etc

Looking for numbers up to 20 around the home and when you are out and about.

Count objects around the home and then write the correct numeral to match the quantity counted. Repeat with other numbers. Discuss which number is the biggest/smallest or is more/less than the other. How do you know?

KEY INSTANT RECALL FACTS

EYFS- SUMMER 2

I can recognise even and odd numbers

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

Even numbers

2, 4, 6, 8, 10

Odd numbers

1, 3, 5, 7, 9

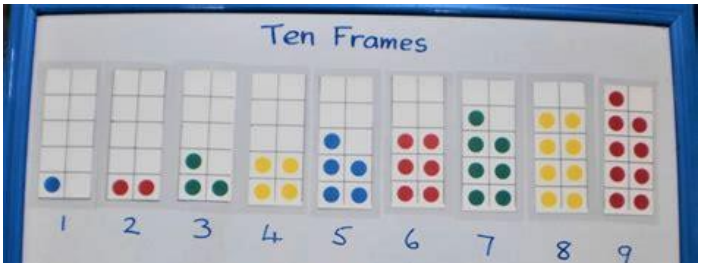
Key Vocabulary
Even
Odd
Share
Equally

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. If you would like more ideas, please speak to your child's teacher.

Use practical resources, for example –

- Sharing objects around the home into two piles is there one left over- the ODD one out, we started with an odd number… use sweets, lego, fruit, stones, leaves etc
- Use a tens frame to identify pairs within a number



- Numicon also highlight the odd one when exploring odd and even numbers. You can access Numicon images here: bit.ly/NumiconPictures

Online activities-

https://www.topmarks.co.uk/maths-games/3-5-years/counting

KEY INSTANT RECALL FACTS

YEAR 1- AUTUMN 1

I can recall 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.org and then see how many questions you can answer in just one minute.

KEY INSTANT RECALL FACTS

YEAR 1- AUTUMN 2

I can recall 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 8 **add** 2?

What is 4 **plus** 6?

What is 10 **take away** 2?

What is 1 **less than** 10?

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.

Online activities –
www.conkermaths.org
https://www.topmarks.co.uk/maths-games/hit-the-button

KEY INSTANT RECALL FACTS

YEAR 1- SPRING 1

By the end of this half term children should know the

I can recall number bonds for each number to 10

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.

Play games, for example –

- Play snap- "Snap!" when it is a number bond.
- Play pairs with cards 0-10. Turn over two cards to make 10- "It's a pair!"
- Sing (To: Row, row, row your boat)
  9+1 are number bonds,
  8+ 2 are friends,
  7+3,
  6+4,
  5+5 are twins!

Online activities-

http://www.ictgames.com/save_the_whale_v4.html
http://mathszone.co.uk/number-facts/number-bonds-to-10/
http://www.mathplayground.com/number_bonds_10.html
https://www.topmarks.co.uk/maths-games/hit-the-button

KEY INSTANT RECALL FACTS

YEAR 1- SPRING 2

I can recall addition 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	**11 + 9 = 20**
1 + 19 = 20	**12 + 8 = 20**
2 + 18 = 20	**13 + 7 = 20**
3 + 17 = 20	**14 + 6 = 20**
4 + 16 = 20	**15 + 5 = 20**
5 + 15 = 20	**16 + 4 = 20**
6 + 14 = 20	**17 + 3 = 20**
7 + 13 = 20	**18 + 2 = 20**
8 + 12 = 20	**19 + 1 = 20**
9 + 11 = 20	**20 + 0 = 20**
10 + 10 = 20	

Key Vocabulary
What is 18 **add** 2?
What is 4 **plus** 16?

They should be able to answer these questions in any order, including missing number questions e.g. 13 + ◯ = 20.

Play games, for example –

- Play snap- "Snap!" when it is a number bond.
- Play pairs with cards 0-20. Turn over two cards to make 20- "It's a pair!"
- Use a dart board- throw a dart- what is the number bond to 20?

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?"

Online activities-

http://www.ictgames.com/funkymum20.html
http://mathsticks.com/category/tags/number-bonds
https://www.topmarks.co.uk/maths-games/hit-the-button

KEY INSTANT RECALL FACTS

YEAR 1 - SUMMER 1

I can recall 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 = 1	**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?

double ***two lots of***

two times ***twice***

times two ***pair***

half ***halved***

divided by 2

shared between two

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.

Online activities –

www.conkermaths.org

http://www.ictgames.com/doubles.htm

http://www.topmarks.co.uk/maths-games/hit-the-button

KEY INSTANT RECALL FACTS

YEAR 1- SUMMER 2

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. In year children should be able to:

- **Tell the time to the nearest hour**
- **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

Online support-

https://www.topmarks.co.uk/time/teaching-clock

KEY INSTANT RECALL FACTS

YEAR 2 – AUTUMN 1

I can recall all 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	**11 + 9 = 20**	**20 – 0 = 20**	**20 - 11 = 9**
1 + 19 = 20	**12 + 8 = 20**	**20 – 1 = 19**	**20 – 12 = 8**
2 + 18 = 20	**13 + 7 = 20**	**20 – 2 = 18**	**20 – 13 = 7**
3 + 17 = 20	**14 + 6 = 20**	**20 – 3 = 17**	**20 - 14 = 6**
4 + 16 = 20	**15 + 5 = 20**	**20 – 4 = 16**	**20 – 15 = 5**
5 + 15 = 20	**16 + 4 = 20**	**20 – 5 = 15**	**20 – 16 = 4**
6 + 14 = 20	**17 + 3 = 20**	**20 – 6 = 14**	**20 – 17 = 3**
7 + 13 = 20	**18 + 2 = 20**	**20 – 7 = 13**	**20 – 18 = 2**
8 + 12 = 20	**19 + 1 = 20**	**20 – 8 = 12**	**20 – 19 = 1**
9 + 11 = 20	**20 + 0 = 20**	**20 – 9 = 11**	**20 – 20 = 0**
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?

They should be able to answer these questions in any order, including missing number questions e.g. 1 + ◯ = 20 or 20 – ◯ = 8.

Play games, for example –

- Play snap- "Snap!" when it is a number bond.
- Play pairs with cards 0-10. Turn over two cards to make 10- "It's a pair!"
- Use a dart board- throw a dart- what is the number bond to 20?

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?"

Online activities-

http://www.ictgames.com/funkymum20.html

http://mathsticks.com/category/tags/number-bonds

https://www.topmarks.co.uk/maths-games/hit-the-button

KEY INSTANT RECALL FACTS

YEAR 2- AUTUMN 2

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

Key Vocabulary
What is **double** 9?
What is **half** of 14?

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.

Online activities –

www.conkermaths.org
https://www.topmarks.co.uk/maths-games/hit-the-button

KEY INSTANT RECALL FACTS

YEAR 2- SPRING 1

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?

times **multiply**

multiple of **lots of**

groups of **divided by**

shared **multiplied by**

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

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.

Online activities-

http://www.topmarks.co.uk/maths-games/hit-the-button

https://ttrockstars.com/

KEY INSTANT RECALL FACTS

YEAR 2- SPRING 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?

times **multiply**

multiple of **lots of**

groups of **divided by**

shared **multiplied by**

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

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.

Online activities-

http://www.topmarks.co.uk/maths-games/hit-the-button

https://ttrockstars.com/

KEY INSTANT RECALL FACTS

YEAR 2- SUMMER 1

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?

times **multiply**

multiple of **lots of**

groups of **divided by**

shared **multiplied by**

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

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 70 divided by 7?* 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.

Online activities-

http://www.topmarks.co.uk/maths-games/hit-the-button

https://ttrockstars.com/

KEY INSTANT RECALL FACTS

YEAR 2- SUMMER 2

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. In year children should be able to:

- **Tell the time to the nearest hour**
- **Tell the time to the nearest half hour**
- **Tell the time to the nearest quarter hour**
- **Tell the time to the nearest 5 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."

Online support-

https://www.topmarks.co.uk/time/teaching-clock

KEY INSTANT RECALL FACTS

YEAR 3- AUTUMN 1

I can recall all number facts within 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	**5 + 9 = 14**	**Example of a fact family**
3 + 8 = 11	**6 + 8 = 14**	
4 + 7 = 11	**7 + 7 = 14**	**6 + 9 = 15**
5 + 6 = 11		**9 + 6 = 15**
	6 + 9 = 15	**15 – 9 = 6**
3 + 9 = 12	**7 + 8 = 15**	**15 – 9 = 6**
4 + 8 = 12		**Examples of other facts**
5 + 7 = 12	**7 + 9 = 16**	
6 + 6 = 12	**8 + 8 = 16**	**4 + 5 = 9**
		13 + 5 = 18
4 + 9 = 13	**8 + 9 = 17**	**19 – 7 = 12**
5 + 8 = 13	**9 + 9 = 18**	**10 – 6 = 4**
6 + 7 = 13		

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).

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.org . See how many questions you can answer in just one minute.

Online activities –

http://www.ictgames.com/doubles.htm

http://www.topmarks.co.uk/maths-games/hit-the-button

http://www.mathplayground.com/index_addition_subtraction.html

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?

times **multiply**

multiple of **lots of**

groups of **divided by**

shared **multiplied by**

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

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

Online activities-

http://www.topmarks.co.uk/maths-games/hit-the-button

https://ttrockstars.com/

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?

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.

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?

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

Online activities-

http://www.topmarks.co.uk/maths-games/hit-the-button

https://ttrockstars.com/

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. In year children should be able to:

- **Tell the time to the nearest hour**
- **Tell the time to the nearest half hour**
- **Tell the time to the nearest quarter hour**
- **Tell the time to the nearest 5 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

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."

Online support-
https://www.topmarks.co.uk/time/teaching-clock

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?

times multiply multiple of lots of groups of divided by shared multiplied by product squared

They should be able to answer these questions in any order, including missing number questions e.g. 8 × ◯ = 16 or ◯ ÷ 8 = 7.

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.

Online activities-

http://www.topmarks.co.uk/maths-games/hit-the-button

https://ttrockstars.com/

KEY INSTANT RECALL FACTS

YEAR 4- AUTUMN 1

I can say 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

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.

Online activities-

http://mathszone.co.uk/number-facts/number-bonds-to-100/

http://www.topmarks.co.uk/maths-games/hit-the-button

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?

times multiply

multiple of lots of

groups of divided by

shared multiplied by

product squared

They should be able to answer these questions in any order, including missing number questions e.g. 6 × ◯ = 72 or ◯ ÷ 6 = 7.

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

Online activities-

http://www.topmarks.co.uk/maths-games/hit-the-button

https://ttrockstars.com/

KEY INSTANT RECALL FACTS

YEAR 4- SPRING 1

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

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?

times multiply multiple of lots of groups of divided by shared multiplied by product squared

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

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!

Online activities-

http://www.topmarks.co.uk/maths-games/hit-the-button

https://ttrockstars.com

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.**

$\frac{1}{2} = 0.5$	$\frac{1}{10} = 0.1$	$\frac{1}{100} = 0.01$
$\frac{1}{4} = 0.25$	$\frac{2}{10} = 0.2$	$\frac{7}{100} = 0.07$
$\frac{3}{4} = 0.75$	$\frac{5}{10} = 0.5$	$\frac{21}{100} = 0.21$
	$\frac{6}{10} = 0.6$	$\frac{75}{100} = 0.75$
	$\frac{9}{10} = 0.9$	$\frac{99}{100} = 0.99$

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.

Online activities-

https://mathsframe.co.uk/en/resources/resource/120/match_fractions_decimals_and_percentages#.UCdcd2MsCEY

KEY INSTANT RECALL FACTS

YEAR 4- SUMMER 1

I know the multiplication and division facts for the 7 times

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?

times multiply multiple of lots of groups of divided by shared multiplied by product squared

They should be able to answer these questions in any order, including missing number questions e.g. 7 × ◯ = 28 or ◯ ÷ 6 = 7.

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.

Online activities-

http://www.topmarks.co.uk/maths-games/hit-the-button

https://ttrockstars.com

KEY INSTANT RECALL FACTS

YEAR 4- SUMMER 2

I can multiply 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.

Online activities-

http://www.arcademics.com/games/grand-prix/grand-prix.html

http://www.crickweb.co.uk/ks2numeracy-multiplication.html

KEY INSTANT RECALL FACTS

YEAR 5- AUTUMN 1

I know the multiplication and division facts for all the times tables up to 12 x 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?

times multiply multiple of lots of groups of divided by shared multiplied by product squared

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

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.

Online activities-

http://www.topmarks.co.uk/maths-games/hit-the-button

https://ttrockstars.com

KEY INSTANT RECALL FACTS

YEAR 5- AUTUMN 2

I know square numbers and square roots up to 150

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

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

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- SPRING 1

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

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.

Key Vocabulary

prime number
composite number
factor
multiple

Activities

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- SPRING 2

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

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? 0.8 + 0.5 = 1.3

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

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.

Online activities-

http://www.topmarks.co.uk/maths-games/hit-the-button

KEY INSTANT RECALL FACTS

YEAR 5- SUMMER 1

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.

Online activities-

http://www.topmarks.co.uk/maths-games/hit-the-button

https://ttrockstars.com

KEY INSTANT RECALL FACTS

YEAR 5- SUMMER 2

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 = 100 centilitres
1 centilitre = 10millilitres

They should also be able to apply these facts to answer questions.
e.g. How many metres in 1½ km?

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?
Weigh items on kitchen or bathroom scales to look at equivalent weight/ mass.- Line will show kg and g
Measure items in the home to compare lengths.
Use walking/ running/ cycling Apps to measure distances from home.
Use a predetermined amount e.g. 1kg bag of sugar. Pour some out and weigh. How much is left? Can you tell me that in another way?
Check using digital scales by changing the units.
Use measuring jug to look at capacities of different containers e.g. bowl/cup/mug.
Use predetermined containers to see what an amount looks like.
How much is left? Measuring to check.
Remember to always ask for the equivalent measure.
Online activities-
http://mathsticks.com/resource/1102/measuring-pairs-game

KEY INSTANT RECALL FACTS

YEAR 6- AUTUMN 1

I know the multiplication facts for all the times tables up to 12 x 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.

They should be able to answer these questions in any order, including missing number questions e.g. 7 × ◯ = 28 or ◯ ÷ 6 = 7.

Key Vocabulary

What is 12 **multiplied by** 6?

What is 7 **times** 8?

What is 84 **divided by** 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

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.

Online activities-

http://www.topmarks.co.uk/maths-games/hit-the-button

https://ttrockstars.com

http://www.math-play.com/Decimals-Jeopardy/decimals-jeopardy-game.html

http://www.decimalsquares.com/dsGames/games/speedway.html

KEY INSTANT RECALL FACTS

YEAR 6- AUTUMN 2

I can identify common factors from 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 × 3 and 56 = 8 × 7.

Top Tips

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 percentage

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**?

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 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, 27, 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

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.

Key Vocabulary

prime number
composite number
factor
multiple

Top Tips

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?