



## **Key Instant Recall Facts KIRFs**

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

Please see attached lists of KIRFs which are align to the new maths curriculum. They are intended to be challenging and where possible that children will be taught the necessary maths in lessons beforehand.



# 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**.

$0 + 1 = 1$	$0 + 4 = 4$	$0 + 6 = 6$
$1 + 0 = 1$	$1 + 3 = 4$	$1 + 5 = 6$
$0 + 2 = 2$	$2 + 2 = 4$	$2 + 4 = 6$
$1 + 1 = 2$	$3 + 1 = 4$	$3 + 3 = 6$
$2 + 0 = 2$	$4 + 0 = 4$	$4 + 2 = 6$
$0 + 3 = 3$	$0 + 5 = 5$	$5 + 1 = 6$
$1 + 2 = 3$	$1 + 4 = 5$	$6 + 0 = 6$
$2 + 1 = 3$	$2 + 3 = 5$	
$3 + 0 = 3$	$3 + 2 = 5$	
	$4 + 1 = 5$	
	$5 + 0 = 5$	

#### 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.  $3 + \square = 5$  or  $4 - \square = 2$ .

#### 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: <https://home.oxfordowl.co.uk/maths/numicon-guide-for-parents/> – your child could make a poster showing the different ways of making 5.

Play games – You can play number bond pairs online at <https://www.ictgames.com/saveTheWhale/index.html>  
<https://www.topmarks.co.uk/Flash.aspx?f=WaystoMake>



# 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**.

$0 + 0 = 0$	$\frac{1}{2}$ of 0 = 0
$1 + 1 = 1$	$\frac{1}{2}$ of 2 = 1
$2 + 2 = 4$	$\frac{1}{2}$ of 4 = 2
$3 + 3 = 6$	$\frac{1}{2}$ of 6 = 3
$4 + 4 = 8$	$\frac{1}{2}$ of 8 = 4
$5 + 5 = 10$	$\frac{1}{2}$ 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 <https://www.topmarks.co.uk/maths-games/hit-the-button> 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**.

$$\begin{array}{lll} 0 + 10 = 10 & 2 + 8 = 10 & 4 + 6 = 10 \\ 10 + 0 = 10 & 8 + 2 = 10 & 6 + 4 = 10 \\ 10 - 10 = 0 & 10 - 8 = 2 & 10 - 6 = 4 \\ 10 - 0 = 10 & 10 - 2 = 8 & 10 - 4 = 6 \end{array}$$

$$\begin{array}{lll} 1 + 9 = 10 & 3 + 7 = 10 & 5 + 5 = 10 \\ 9 + 1 = 10 & 7 + 3 = 10 & 10 - 5 = 5 \\ 10 - 9 = 1 & 10 - 7 = 3 & \\ 10 - 1 = 9 & 10 - 3 = 7 & \end{array}$$

#### 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.  $6 + \square = 10$  or  $10 - \square = 3$ .

#### 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? They had 10 sweets but ate 3, how many left?

Make a poster – We use Numicon at school. You can find pictures of the Numicon shapes here: <https://home.oxfordowl.co.uk/maths/numicon-guide-for-parents/> – your child could make a poster showing the different ways of making 10

Play games – You can play number bond pairs online at <https://www.topmarks.co.uk/maths-games/hit-the-button> 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

\_\_\_ o'clock

Half past \_\_\_

### 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.

Days of the Week and Months of the Year – Can they say these in order. Do they know what comes before and after each one? When is their birthday month?

Play "What's the time Mr Wolf?"– Play games <https://www.topmarks.co.uk/time/teaching-clock> and ask your child what time it is. 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.  $1 + \square = 10$  or  $9 - \square = 8$ .

#### 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.

Monster Ten frames - <https://www.coolmath4kids.com/manipulatives/ten-frame>

How do you make the number 7? Use the blue and orange monsters to make 7 in different ways. Repeat for the other numbers up to 10.



# 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.  $19 + \square = 20$  or  $20 - \square = 8$ .

#### 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](http://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 <https://www.topmarks.co.uk/maths-games/hit-the-button>



# Key Instant Recall Facts

## Year 2 – Autumn 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**.

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

#### 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.  $10 \times \square = 80$  or  $\square \div 10 = 6$ .

#### 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 **thirteen** and **thirty**.

Songs, Chants and Games – 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. Play TT Rockstars <https://play.ttrockstars.com/>

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 – 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**.

$0 + 0 = 0$	$\frac{1}{2}$ of 0 = 0	
$1 + 1 = 1$	$\frac{1}{2}$ of 2 = 1	$11 + 11 = 22$
$2 + 2 = 4$	$\frac{1}{2}$ of 4 = 2	$12 + 12 = 24$
$3 + 3 = 6$	$\frac{1}{2}$ of 6 = 3	$13 + 13 = 26$
$4 + 4 = 8$	$\frac{1}{2}$ of 8 = 4	$14 + 14 = 28$
$5 + 5 = 10$	$\frac{1}{2}$ of 10 = 5	$15 + 15 = 30$
$6 + 6 = 12$	$\frac{1}{2}$ of 12 = 6	$16 + 16 = 32$
$7 + 7 = 14$	$\frac{1}{2}$ of 14 = 7	$17 + 17 = 34$
$8 + 8 = 16$	$\frac{1}{2}$ of 16 = 8	$18 + 18 = 36$
$9 + 9 = 18$	$\frac{1}{2}$ of 18 = 9	$19 + 19 = 38$
$10 + 10 = 20$	$\frac{1}{2}$ 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 <https://www.topmarks.co.uk/maths-games/hit-the-button> and see how many questions you can answer on doubles and halves.

Practical fun – Give them 7 sweets and ask what double is, give them 12 coins and ask them to halve them. Etc.



# 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**.

$5 \times 1 = 5$	$5 \div 5 = 1$
$5 \times 2 = 10$	$10 \div 5 = 2$
$5 \times 3 = 15$	$15 \div 5 = 3$
$5 \times 4 = 20$	$20 \div 5 = 4$
$5 \times 5 = 25$	$25 \div 5 = 5$
$5 \times 6 = 30$	$30 \div 5 = 6$
$5 \times 7 = 35$	$35 \div 5 = 7$
$5 \times 8 = 40$	$40 \div 5 = 8$
$5 \times 9 = 45$	$45 \div 5 = 9$
$5 \times 10 = 50$	$50 \div 5 = 10$
$5 \times 11 = 55$	$55 \div 5 = 11$
$5 \times 12 = 60$	$60 \div 5 = 12$

#### 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.  $5 \times \square = 40$  or  $\square \div 5 = 9$ .

#### 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, Chants and Games – 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. Play TT Rockstars <https://play.ttrockstars.com/>

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 <https://www.multiplication.com/learn/fact-navigator> has some strange picture stories to help children remember.



# 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.”

Play “What’s the time Mr Wolf?”– Play games

<https://www.topmarks.co.uk/time/teaching-clock> and ask your child what time it is. You could also give your child some responsibility for watching the clock.



# Key Instant Recall Facts

## Year 2 – Summer 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**.

$2 \times 1 = 2$	$2 \div 2 = 1$
$2 \times 2 = 4$	$4 \div 2 = 2$
$2 \times 3 = 6$	$6 \div 2 = 3$
$2 \times 4 = 8$	$8 \div 2 = 4$
$2 \times 5 = 10$	$10 \div 2 = 5$
$2 \times 6 = 12$	$12 \div 2 = 6$
$2 \times 7 = 14$	$14 \div 2 = 7$
$2 \times 8 = 16$	$16 \div 2 = 8$
$2 \times 9 = 18$	$18 \div 2 = 9$
$2 \times 10 = 20$	$20 \div 2 = 10$
$2 \times 11 = 22$	$22 \div 2 = 11$
$2 \times 12 = 24$	$24 \div 2 = 12$

#### 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.  $2 \times \square = 8$  or  $\square \div 2 = 6$ .

#### 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, Chants and Games – 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. Play TT Rockstars <https://play.ttrockstars.com/>

Use what you already know – If your child knows that  $2 \times 5 = 10$ , they can use this fact to work out that  $2 \times 6 = 12$  by counting on one more group of 2.

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 <https://www.multiplication.com/learn/fact-navigator> 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

$6 + 9 = 15$

$9 + 6 = 15$

$15 - 9 = 6$

$15 - 6 = 9$

#### 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 <https://www.topmarks.co.uk/number-facts/number-fact-families>  
<https://www.topmarks.co.uk/maths-games/hit-the-button>



# 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**.

$3 \times 1 = 3$	$1 \times 3 = 3$	$3 \div 3 = 1$	$3 \div 1 = 3$
$3 \times 2 = 6$	$2 \times 3 = 6$	$6 \div 3 = 2$	$6 \div 2 = 3$
$3 \times 3 = 9$	$3 \times 3 = 9$	$9 \div 3 = 3$	$9 \div 3 = 3$
$3 \times 4 = 12$	$4 \times 3 = 12$	$12 \div 3 = 4$	$12 \div 4 = 3$
$3 \times 5 = 15$	$5 \times 3 = 15$	$15 \div 3 = 5$	$15 \div 5 = 3$
$3 \times 6 = 18$	$6 \times 3 = 18$	$18 \div 3 = 6$	$18 \div 6 = 3$
$3 \times 7 = 21$	$7 \times 3 = 21$	$21 \div 3 = 7$	$21 \div 7 = 3$
$3 \times 8 = 24$	$8 \times 3 = 24$	$24 \div 3 = 8$	$24 \div 8 = 3$
$3 \times 9 = 27$	$9 \times 3 = 27$	$27 \div 3 = 9$	$27 \div 9 = 3$
$3 \times 10 = 30$	$10 \times 3 = 30$	$30 \div 3 = 10$	$30 \div 10 = 3$
$3 \times 11 = 33$	$11 \times 3 = 33$	$33 \div 3 = 11$	$33 \div 11 = 3$
$3 \times 12 = 36$	$12 \times 3 = 36$	$36 \div 3 = 12$	$36 \div 12 = 3$

#### 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.  $3 \times \square = 18$  or  $\square \div 3 = 11$ .

#### 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, Chants and Games – 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. Play TT Rockstars <https://play.ttrockstars.com/>

Buy one get three free – If your child knows one fact (e.g.  $3 \times 5 = 15$ ), 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.  $3 \times 12 = 36$ . The answer to the multiplication is 36, so  $36 \div 3 = 12$  and  $36 \div 12 = 3$



# 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**.

	<u>Number of days in each month</u>			
There are 60 seconds in a minute.	January	31	July	31
There are 60 minutes in an hour.	February	28/29	August	31
There are 24 hours in a day.	March	31	September	30
There are 7 days in a week.	April	30	October	31
There are 12 months in a year.	May	31	November	30
There are 365 days in a year.	June	30	December	31
There are 366 days in a leap year.				

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 30<sup>th</sup> April?

What day comes before 1<sup>st</sup> 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. You can also make your hands into fists and count the knuckles starting on the left. Raised ones have 31 days and lower knuckles have 30 or less days.

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**.

$4 \times 1 = 4$	$1 \times 4 = 4$	$4 \div 4 = 1$	$4 \div 1 = 4$
$4 \times 2 = 8$	$2 \times 4 = 8$	$8 \div 4 = 2$	$8 \div 2 = 4$
$4 \times 3 = 12$	$3 \times 4 = 12$	$12 \div 4 = 3$	$12 \div 3 = 4$
$4 \times 4 = 16$	$4 \times 4 = 16$	$16 \div 4 = 4$	$16 \div 4 = 4$
$4 \times 5 = 20$	$5 \times 4 = 20$	$20 \div 4 = 5$	$20 \div 5 = 4$
$4 \times 6 = 24$	$6 \times 4 = 24$	$24 \div 4 = 6$	$24 \div 6 = 4$
$4 \times 7 = 28$	$7 \times 4 = 28$	$28 \div 4 = 7$	$28 \div 7 = 4$
$4 \times 8 = 32$	$8 \times 4 = 32$	$32 \div 4 = 8$	$32 \div 8 = 4$
$4 \times 9 = 36$	$9 \times 4 = 36$	$36 \div 4 = 9$	$36 \div 9 = 4$
$4 \times 10 = 40$	$10 \times 4 = 40$	$40 \div 4 = 10$	$40 \div 10 = 4$
$4 \times 11 = 44$	$11 \times 4 = 44$	$44 \div 4 = 11$	$44 \div 11 = 4$
$4 \times 12 = 48$	$12 \times 4 = 48$	$48 \div 4 = 12$	$48 \div 12 = 4$

#### 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.  $4 \times \square = 16$  or  $\square \div 4 = 7$ .

#### 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.

Songs, Chants and Games – 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. Play TT Rockstars <https://play.ttrockstars.com>

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  $6 \times 4 = 24$ .

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

Use memory tricks – For those hard-to-remember facts <https://www.multiplication.com/learn/fact-navigator> has some strange picture stories to help children remember.



# 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.”

Games - <https://www.topmarks.co.uk/time/teaching-clock> Ask your child to make the time or read the clock after you have made a time.



# 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**.

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

#### 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.  $8 \times \square = 16$  or  $\square \div 8 = 7$ .

#### 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, Chants and Games – 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. Play TT Rockstars <https://play.ttrockstars.com>

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

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

Use memory tricks – For those hard-to-remember facts <https://www.multiplication.com/learn/fact-navigator> 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:

$$\begin{array}{ll} 60 + 40 = 100 & 37 + 63 = 100 \\ 40 + 60 = 100 & 63 + 37 = 100 \\ 100 - 40 = 60 & 100 - 63 = 37 \\ 100 - 60 = 40 & 100 - 37 = 63 \end{array}$$

$$\begin{array}{ll} 75 + 25 = 100 & 48 + 52 = 100 \\ 25 + 75 = 100 & 52 + 48 = 100 \\ 100 - 25 = 75 & 100 - 52 = 48 \\ 100 - 75 = 25 & 100 - 48 = 52 \end{array}$$

#### 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.  $49 + \square = 100$  or  $100 - \square = 72$ .

### 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 <https://www.topmarks.co.uk/number-facts/number-fact-families>  
<https://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**.

$6 \times 1 = 6$	$1 \times 6 = 6$	$6 \div 6 = 1$	$6 \div 1 = 6$
$6 \times 2 = 12$	$2 \times 6 = 12$	$12 \div 6 = 2$	$12 \div 2 = 6$
$6 \times 3 = 18$	$3 \times 6 = 18$	$18 \div 6 = 3$	$18 \div 3 = 6$
$6 \times 4 = 24$	$4 \times 6 = 24$	$24 \div 6 = 4$	$24 \div 4 = 6$
$6 \times 5 = 30$	$5 \times 6 = 30$	$30 \div 6 = 5$	$30 \div 5 = 6$
$6 \times 6 = 36$	$6 \times 6 = 36$	$36 \div 6 = 6$	$36 \div 6 = 6$
$6 \times 7 = 42$	$7 \times 6 = 42$	$42 \div 6 = 7$	$42 \div 7 = 6$
$6 \times 8 = 48$	$8 \times 6 = 48$	$48 \div 6 = 8$	$48 \div 8 = 6$
$6 \times 9 = 54$	$9 \times 6 = 54$	$54 \div 6 = 9$	$54 \div 9 = 6$
$6 \times 10 = 60$	$10 \times 6 = 60$	$60 \div 6 = 10$	$60 \div 10 = 6$
$6 \times 11 = 66$	$11 \times 6 = 66$	$66 \div 6 = 11$	$66 \div 11 = 6$
$6 \times 12 = 72$	$12 \times 6 = 72$	$72 \div 6 = 12$	$72 \div 12 = 6$

#### 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

Songs, Chants and Games – 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. Play TT Rockstars <https://play.ttrockstars.com/>

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

Buy one get three free – If your child knows one fact (e.g.  $3 \times 6 = 18$ ), 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.  $6 \times 12 = 72$ . The answer to the multiplication is 72, so  $72 \div 6 = 12$  and  $72 \div 12 = 6$

Use memory tricks – For those hard-to-remember facts

<https://www.multiplication.com/learn/fact-navigator> has some strange picture stories to help children remember



# 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**.

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

#### 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.  $9 \times \square = 54$  or  $\square \div 9 = 11$ .

### 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.  $7 \times 10 - 7 = 70 - 7 = 63$ ). What do you notice?  
What happens if you add your original number instead?  
(e.g.  $7 \times 10 + 7 = 70 + 7 = 77$ )

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!

Songs, Chants and Games – 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. Play TT Rockstars <https://play.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  $\frac{1}{4}$  as a **decimal**?

### ETC

Children should be able to convert between decimals and fractions for  $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{3}{4}$  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.

[https://mathsframe.co.uk/en/resources/resource/120/match\\_fractions\\_decimals\\_and\\_percent\\_ages#.UCdcd2MsCEY](https://mathsframe.co.uk/en/resources/resource/120/match_fractions_decimals_and_percent_ages#.UCdcd2MsCEY) is a great game for matching up fractions and decimals. You can learn about percentages too.



# 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**.

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

#### 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.  $7 \times \bigcirc = 28$  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.

Online games – There are many games online which can help children practise their multiplication and division facts. TT Rockstars is a good place to start.

<https://play.ttrockstars.com/>

Use memory tricks – For those hard-to-remember facts

<https://www.multiplication.com/learn/fact-navigator> has some strange picture stories to help children remember.

Order the facts – Which facts does your child find easier or harder? Put them in order from the easiest to the hardest. Practise the harder ones more often.



# 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**.

$7 \times 10 = 70$

$10 \times 7 = 70$

$70 \div 7 = 10$

$70 \div 10 = 7$

$30 \times 10 = 300$

$10 \times 30 = 300$

$300 \div 30 = 10$

$300 \div 10 = 30$

$0.8 \times 10 = 8$

$10 \times 0.8 = 8$

$8 \div 0.8 = 10$

$8 \div 10 = 0.8$

$6 \times 100 = 600$

$100 \times 6 = 600$

$600 \div 6 = 100$

$600 \div 100 = 6$

$40 \times 100 = 4000$

$100 \times 40 = 4000$

$4000 \div 40 = 100$

$4000 \div 100 = 40$

$0.2 \times 10 = 2$

$10 \times 0.2 = 2$

$2 \div 0.2 = 10$

$2 \div 10 = 0.2$

#### 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.  $10 \times \square = 5$  or  $\square \div 10 = 60$ .

#### 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.  $0.49 + \square = 10$  or  $7.2 + \square = 10$ .

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



# Key Instant Recall Facts

## Year 5 – Autumn 2

**I know the multiplication and division facts for all times tables up to  $12 \times 12$ .**

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

Please see separate sheet for all times table facts.

### 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.  $7 \times \square = 28$  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.

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. TT Rockstars is a good place to start.

<https://play.ttrockstars.com/>

Use memory tricks – For those hard-to-remember facts

<https://www.multiplication.com/learn/fact-navigator> 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  $1\frac{1}{2}$  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*

*A composite number is divisible by a number other than 1 or itself. (Any number that is not a prime number)*

*The following numbers are composite numbers:*

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

#### Key Vocabulary

**prime number**

**composite number**

**factor**

**multiple**

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**.

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

#### 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?

Another game is [https://www.mathematics-monster.com/tests/bubble\\_pop\\_square\\_numbers\\_test.html](https://www.mathematics-monster.com/tests/bubble_pop_square_numbers_test.html)

Use memory tricks – For those hard-to-remember facts

<https://www.multiplication.com/learn/fact-navigator> 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  $12 \times 12$ . 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:

$$24 = 4 \times 6$$

$$24 = 8 \times 3$$

$$56 = 7 \times 8$$

$$54 = 9 \times 6$$

$$42 = 6 \times 7$$

$$25 = 5 \times 5$$

$$84 = 7 \times 12$$

$$15 = 5 \times 3$$

#### 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 <https://www.topmarks.co.uk/maths-games/multiples-and-factors> to practise finding factor pairs

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

Use memory tricks – For those hard-to-remember facts <https://www.multiplication.com/learn/fact-navigator> has some strange picture stories to help children remember.



# Key Instant Recall Facts

## Year 6 – 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.  $0.49 \oplus = 10$  or  $7.2 \oplus = 10$ .

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



# 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 highest common factor of 24 and 56 is 8.*

#### Key Vocabulary

**factor**

**common factor**

**multiple**

**highest 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 highest common factor, for example: [Multiples and Factors \(topmarks.co.uk\)](http://www.topmarks.co.uk/Multiples-and-Factors)

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**.

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

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

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

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

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

$$\frac{2}{5} = 0.6$$

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

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

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

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

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

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

#### Key Vocabulary

How many **tenths** is 0.8?

How many **hundredths** is 0.12?

Write 0.75 as a **fraction**?

Write  $\frac{1}{4}$  as a **decimal**?

Children should be able to convert between decimals and fractions for  $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{3}{4}$  and know the amount of tenths and hundredths they have.

#### 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.

[https://mathsframe.co.uk/en/resources/resource/120/match\\_fractions\\_decimals\\_and\\_percentages#.UCdcd2MsCEY](https://mathsframe.co.uk/en/resources/resource/120/match_fractions_decimals_and_percentages#.UCdcd2MsCEY) is a great game for matching up fractions, decimals and percentages.



# 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,  
27, 29, 31, 37, 41, 43, 47*

*A composite number is divisible by a number other than 1 or itself. (Any number that is not a prime number)*

*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?