

Key Instant Recall Facts – Yr 1 to 6

KIRFs



St Anne's Catholic Primary School
Christ at the heart of all we do

The KIRFs for each year group are aligned to the 2014 National Curriculum and the White Rose Maths Scheme of Work which is in place throughout St Anne's school.

Mental recall of number facts is vital to successful progress in number; these skills are fostered once understanding of new concepts has been achieved, often through work with concrete apparatus and pictorial representations.

KIRFs are taught at the start of each daily maths session.

You can support your child at home by helping them to develop mental recall and manipulation of number facts as outlined on the following pages. These KIRFs build upon prior knowledge, understanding and recall. If your child is finding work at the prescribed level challenging, it is a good idea to spend some time with preceding KIRFs. Your child's class teacher will be happy to help.



Key Instant Recall Facts – Year 5, Autumn 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:

$$24 = 4 \times 6$$

$$24 = 8 \times 3$$

$$56 = 7 \times 8$$

$$54 = 9 \times 6$$

$$42 = 6 \times 7$$

$$25 = 5 \times 5$$

$$84 = 7 \times 12$$

$$15 = 5 \times 3$$

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.

Tips to support learning:

- Repetition of these facts is key – little and often is best. Maybe you could focus on a fact family a day / week.
- 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.



Key Instant Recall Facts – Year 5, Autumn 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.

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

Tips to support learning:

- Repetition of these facts is key – little and often is best.
- 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 numbers 2 – 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 can they find?



Key Instant Recall Facts – Year 5, Spring 1

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

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

$$1^2 = 1 \times 1 = 1$$

$$2^2 = 2 \times 2 = 4$$

$$3^2 = 3 \times 3 = 9$$

$$4^2 = 4 \times 4 = 16$$

$$5^2 = 5 \times 5 = 25$$

$$6^2 = 6 \times 6 = 36$$

$$7^2 = 7 \times 7 = 49$$

$$8^2 = 8 \times 8 = 64$$

$$9^2 = 9 \times 9 = 81$$

$$10^2 = 10 \times 10 = 100$$

$$11^2 = 11 \times 11 = 121$$

$$12^2 = 12 \times 12 = 144$$

$$\sqrt{1} = 1$$

$$\sqrt{4} = 2$$

$$\sqrt{9} = 3$$

$$\sqrt{16} = 4$$

$$\sqrt{25} = 5$$

$$\sqrt{36} = 6$$

$$\sqrt{49} = 7$$

$$\sqrt{64} = 8$$

$$\sqrt{81} = 9$$

$$\sqrt{100} = 10$$

$$\sqrt{121} = 11$$

$$\sqrt{144} = 12$$

Key Vocabulary

What is 8 squared?

What is 7 multiplied by itself?

What is the square root of 144?

Is 81 a square number?

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

Tips to support learning:

- Repetition of these facts is key – little and often is best.
- Cycling squares – a challenge involving square numbers.

www.nrich.maths.org/1151



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. $0.49 + \bigcirc = 10$ or $7.2 + \bigcirc = 10$.

Tips to support learning:

- Repetition of these facts is key – little and often is best. Maybe you could focus on a fact family a day / week.
- Use one known fact to create three more: I know $1.2 + 0.8 = 2$
so $0.8 + 1.2 = 2$
 $2 - 1.2 = 0.8$
 $2 - 0.8 = 1.2$



Key Instant Recall Facts – Year 5, Summer 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?

Tips to support learning:

- Repetition of these facts is key – little and often is best.
- Look at the prefixes – do they help to work out meaning? Kilo, centi, milli
- Convert measurements of quantities in a recipe.
- Calculate lengths and distances in a range of measurements. How tall are you in metres, centimetres and millimetres?



Key Instant Recall Facts – Year 5, Summer 2

I know the multiplication and division facts for all times tables up to 12×12 .

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

X	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

Key Vocabulary

What is 12 multiplied by 6?

What is 7 times 8?

What is 84 divided by 7?

Tips to support learning:

- Repetition of these facts is key – little and often is best. Maybe you could focus on a fact family a day / week.
- 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.
- Answer questions in any order, including missing number questions such as $7 \times \square = 28$ or $\square \div 6 = 7$