Key Instant Recall Facts

Year 6: Autumn 1

Target: Derive multiplication & division facts using multiples of 10 & decimal numbers

By the end of the 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

The children should also know the corresponding division facts…

e.g. 144 ÷ 12 = 12 72 ÷ 9 = 8

…and derived facts (multiples of 10 and decimals)

e.g. 5 x 9 = 45 so 50 x 9 = 450

24 ÷ 6 = 4 so 24 ÷ 0.6 = 40

If your child knows one fact (e.g. 3 x 14 = 12), can they tell you the other three facts in the same fact family (e.g. 4 x 3 = 12, 12 ÷ 3 = 4, 12 ÷ 4 = 3)? Then ask for additional facts using multiples of 10 and decimals e.g. 40 x 3 = 120, 120 ÷ 30 = 4, 0.4 x 3 = 1.2, 1.2 ÷ 0.3 = 4

Top Tips:

The secret to success is practising little and often. Use time wisely. Can you practise these KIRFs while walking to school or during a car journey? You do not need to practise them all at once; perhaps you could have a fact of the day. If you would like more ideas, please speak to your child's teacher.

Useful Links:

Super Movers: Times Tables Collection (bbc.co.uk)

Unit - Oak National Academy (thenational.academy)

Times Tables Games for 7 to 11 year olds (topmarks.co.uk)

Hit the Button - Quick fire maths practise for 6-11 year olds (topmarks.co.uk)

Don't practise until you get it right, practise until you can't get it wrong!

Key Instant Recall Facts

Year 6: Autumn 2

Target: Identify common factors of a pair of numbers

By the end of the 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 that 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

Children need to 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 and 56 is divisible by 8. 24 divided by 8 is 3 and 56 divided by 8 is 7"

Top Tips:

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Useful Links:

Factors | Common Factors | Greatest Common Factor (GCF) | Math with Mr. J (youtube.com)

What Are Common Factors? Definition, GCF, Examples, Facts (splashlearn.com)

Multiples and Factors (topmarks.co.uk)

Greatest Common Factor Math Game - Sheppard Software Educational Games for kids

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Key Instant Recall Facts

Year 6: Spring 1

Target: Know common fraction, decimal and percentages equivalences

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

Fraction	Decimal	Percentage
½	0.5	50%
¼	0.25	25%
¾	0.75	75%
⅕	0.2	20%
⅖	0.4	40%
$\frac{1}{10}$	0.1	10%
$\frac{1}{100}$	0.01	1%

These are some examples, not the exhaustive list!

Children could then try other examples to convert into fractions, decimals and percentages.

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.

Useful Links:

Fractions and Decimals Maths Games (topmarks.co.uk)

Matching Fractions, Decimals and Percentages (maths.org)

Equivalent fractions and decimals - Maths - Learning with BBC Bitesize - BBC Bitesize

Decimal Numbers Index (mathsisfun.com)

Convert Percents to Decimals (mathsisfun.com)

Fractions Index (mathsisfun.com)

Don't practise until you get it right, practise until you can't get it wrong!

Key Instant Recall Facts

Year 6: Spring 2

Target: Know up to 12^2 and 5^3

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

×	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

A **square number** is a number that is multiplied by itself. If you square a value, you will always get a positive answer.

E.g. 4 squared means: 4 x 4 and can be written as 4^2. It is spoken as "4 squared" or "4 to the power of 2".

A **cube number** is a number that is multiplied by **itself** and then **itself** again.
E.g. 3 cubed means: 3 x 3 x 3 and can be written as 3^3. It is spoken as "3 cubed" or "3 to the power of 3".

1^3	1 x 1 x 1 =	1
2^3	2 x 2 x 2 =	8
3^3	3 x 3 x 3 =	27
4^3	4 x 4 x 4 =	64
5^3	5 x 5 x 5 =	125

Top Tips:

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Useful Links:

What is a square number and what is a cube number? - BBC Bitesize

Lesson: Square and cube numbers | Oak National Academy (thenational.academy)

Game for Learning Square Numbers (mathematics-monster.com)

Numbers Square and cube - Teaching resources (wordwall.net)

Don't practise until you get it right, practise until you can't get it wrong!

Key Instant Recall Facts

Year 6: Summer 1

Target: Know doubles and halves of 2-digit decimals

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

Here are some examples of doubling and halving 2-digit decimals:

Half	Decimal	Double
6.31	**12.62**	**25.24**
4.1	**8.2**	**16.4**
2.24	**4.48**	**8.96**

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.

- ***Children can use their knowledge of place value to support doubling/halving decimals*** *e.g. knowing double 82 is 164 because double 82 = 164*
- ***Children can partition to support doubling/halving decimals*** *e.g. with 4.48…half of 4 is 2 and half of 48 is 24 (so half of 0.48 is 0.24) which equals 2.24*

Useful Links:

Doubling and Halving Decimal Numbers Tutorial (youtube.com)

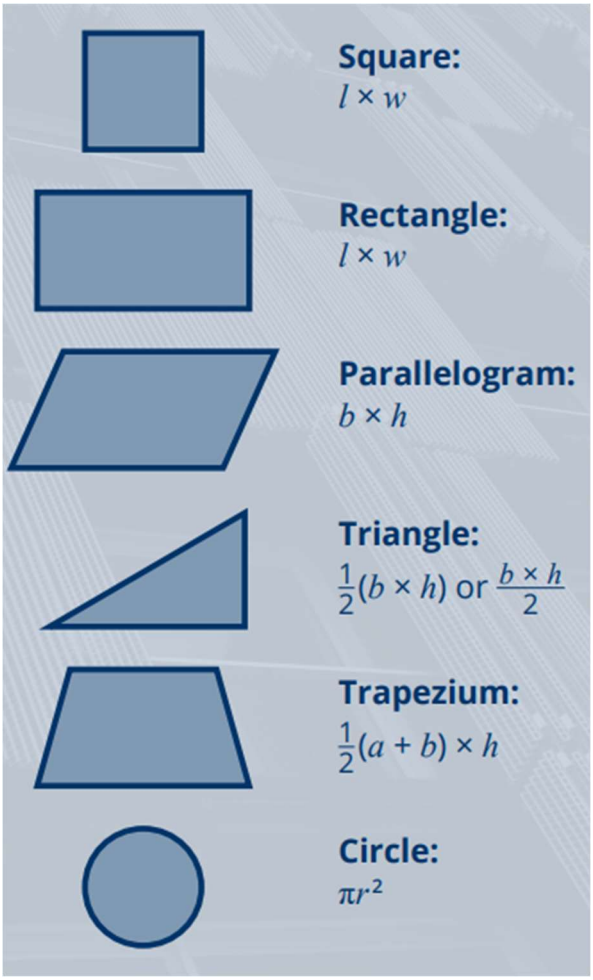
Doubling and Halving Decimal Numbers - Math is the Way Corner - YouTube

Don't practise until you get it right, practise until you can't get it wrong!

Key Instant Recall Facts

Year 6: Summer 2

Target: Know the formulae for finding the area of different shapes



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.

Useful Links:

How to work out an area - BBC Bitesize

Area of squares, rectangles and compound shapes - 2-dimensional shapes - Edexcel - GCSE Maths Revision - Edexcel - BBC Bitesize

ITP Area - Mathsframe

Don't practise until you get it right, practise until you can't get it wrong!