



Key Instant Recall Facts

YEAR 6 – Autumn 1

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

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

This is a chance for Year 6 children to consolidate their knowledge of multiplication and division facts and to increase their speed of recall. They should be able to answer these questions in any order, including missing number questions

1	2	3	4	5	6
$1 \times 1 = 1$	$2 \times 2 = 4$	$3 \times 3 = 9$	$4 \times 4 = 16$	$5 \times 5 = 25$	$6 \times 6 = 36$
$1 \times 2 = 2$	$2 \times 3 = 6$	$3 \times 4 = 12$	$4 \times 5 = 20$	$5 \times 6 = 30$	$6 \times 7 = 42$
$1 \times 3 = 3$	$2 \times 4 = 8$	$3 \times 5 = 15$	$4 \times 6 = 24$	$5 \times 7 = 35$	$6 \times 8 = 48$
$1 \times 4 = 4$	$2 \times 5 = 10$	$3 \times 6 = 18$	$4 \times 7 = 28$	$5 \times 8 = 40$	$6 \times 9 = 54$
$1 \times 5 = 5$	$2 \times 6 = 12$	$3 \times 7 = 21$	$4 \times 8 = 32$	$5 \times 9 = 45$	$6 \times 10 = 60$
$1 \times 6 = 6$	$2 \times 7 = 14$	$3 \times 8 = 24$	$4 \times 9 = 36$	$5 \times 10 = 50$	$6 \times 11 = 66$
$1 \times 7 = 7$	$2 \times 8 = 16$	$3 \times 9 = 27$	$4 \times 10 = 40$	$5 \times 11 = 55$	$6 \times 12 = 72$
$1 \times 8 = 8$	$2 \times 9 = 18$	$3 \times 10 = 30$	$4 \times 11 = 44$	$5 \times 12 = 60$	
$1 \times 9 = 9$	$2 \times 10 = 20$	$3 \times 11 = 33$	$4 \times 12 = 48$		
$1 \times 10 = 10$	$2 \times 11 = 22$	$3 \times 12 = 36$			
$1 \times 11 = 11$	$2 \times 12 = 24$				
$1 \times 12 = 12$					

7	8	9	10	11	12
$7 \times 7 = 49$	$8 \times 8 = 64$	$9 \times 9 = 81$	$10 \times 10 = 100$	$11 \times 11 = 121$	$12 \times 12 = 144$
$7 \times 8 = 56$	$8 \times 9 = 72$	$9 \times 10 = 90$	$10 \times 11 = 110$	$11 \times 12 = 132$	
$7 \times 9 = 63$	$8 \times 10 = 80$	$9 \times 11 = 99$	$10 \times 12 = 120$		
$7 \times 10 = 70$	$8 \times 11 = 88$	$9 \times 12 = 108$			
$7 \times 11 = 77$	$8 \times 12 = 96$				
$7 \times 12 = 84$					

Key Vocabulary

What is 8 multiplied by 6?

What is 7 times 4?

What is 81 divided by 9?

What is the product of 5 and 7?

Children who have already mastered their times tables should apply this knowledge to answer questions including decimals

e.g. $0.7 \times \square = 4.2$ or $\square \div 60 = 0.7$

Things to Try

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 start with one particular times tables and ensure they know all of them before moving onto another times table.

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 and Queen = 12). How many questions can they answer correctly in 2 minutes? Practise regularly and see if they can beat their highest score.

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

Useful Websites:

<https://www.topmarks.co.uk/maths-games/daily10> - Level 6 Multiplication/Level 6 Division

<https://play.ttrockstars.com/> - Children should be regularly practising their times tables on TTRS and improving their speed

<http://www.conkermaths.org/>

www.timestables.co.uk



Key Instant Recall Facts

YEAR 6 – Autumn 2

I know common decimals, fractions and percentage equivalences

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	=	50%
$\frac{1}{4}$	=	0.25	=	25%
$\frac{3}{4}$	=	0.75	=	75%
$\frac{1}{10}$	=	0.1	=	10%
$\frac{3}{10}$	=	0.3	=	30%
$\frac{1}{5}$	=	0.2	=	20%
$\frac{3}{5}$	=	0.6	=	60%
$\frac{1}{100}$	=	0.01	=	1%
Etc...				

Children should be able to convert between decimals, fractions and percentages for $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$ and any number of tenths and hundredths.

Key Vocabulary

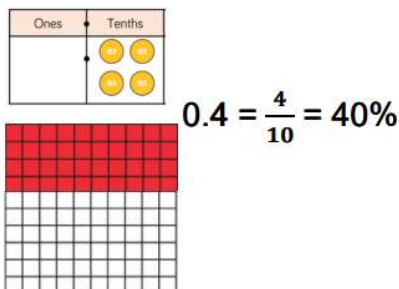
Write 0.75 as a fraction.

Write $\frac{1}{4}$ as a decimal.

What is $\frac{3}{4}$ as a percentage?

What can this look like?

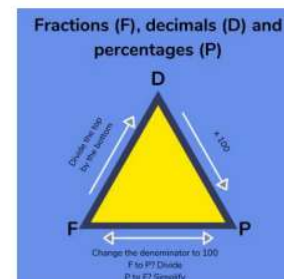
Concrete:



Pictorial:

1 Whole or 100%			
$\frac{1}{2}$	50% or 0.5		
$\frac{1}{3}$	33.3%	0.3	
$\frac{1}{4}$	25%	0.25	
$\frac{1}{5}$	20%	0.2	
$\frac{1}{10}$	10%	0.1	

Abstract:



0.5	50%	$\frac{1}{2}$
0.25	25%	$\frac{1}{4}$
0.1	10%	$\frac{1}{10}$
0.01	1%	$\frac{1}{100}$
0.2	20%	$\frac{1}{5}$
0.75	75%	$\frac{3}{4}$

Things to Try

Dominoes- write the fraction, decimal and percentage the domino is showing

Pair's game- make your own fraction, decimal, percentage card matching game

FDP Poster- create a poster which explains how to convert between fractions, decimals and percentages

Let's go shopping- look out for percentages when out shopping. What is 25% as a decimal?

Useful Websites:

<https://www.topmarks.co.uk/Search.aspx?q=fractions%20decimals%20and%20percentages>

<https://www.transum.org/Maths/Activity/FractionDecimalPercentage/>

<http://mrbartonmaths.com/topics/fractions-decimals-percentages/fraction-decimal-percentage-equivalence/lessons.html>



Key Instant Recall Facts

YEAR 6 – Spring 1

I know how to multiply and divide by 10, 100, 1000.

By the end of this half term, children should be able to multiply and divide numbers by 10, 100, 1000 and 0.1. The aim is for them to recall these facts instantly.


<u>Multiplying and Dividing by 10, 100 and 1000</u>								
10 000	1000	100	10	1	●	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$
					●			

Multiplying

X 10 digits move LEFT 1 space

X 100 digits move LEFT 2 spaces

X 1000 digits move LEFT 3 spaces




Dividing

÷ 10 digits move RIGHT 1 space

÷ 100 digits move RIGHT 2 spaces

÷ 1000 digits move RIGHT 3 spaces



KEY VOCABULARY and QUESTIONS

Multiply/ product/ times by /lots of/ share/ group /divide / times/ place value

What is 625×100 ? Explain how you know. Prove it!

How do you divide a number by 1000? Show me

Things to Try

Make your own spinners to practise the skill.

Flash cards - Create a set of flash cards with facts on to practise.

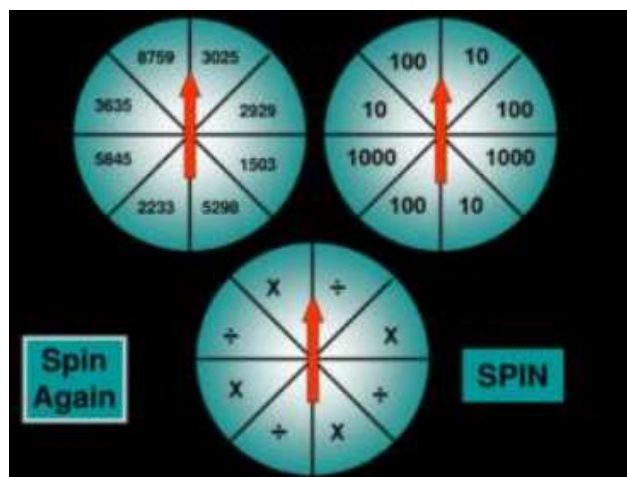
Timed Challenges - How well are you doing? How many questions can you answer in 2 minutes? Can you beat your own record?

Videos to watch –

<https://vimeo.com/418156588>

BBC Bite size -

<https://www.bbc.co.uk/bitesize/topics/z36tyrd/articles/z2fkwx5>



Useful Websites:

<https://bsaky4.weebly.com/homework/multiply-by-10-100-and-1000>

<https://www.topmarks.co.uk/Flash.aspx?f=bingotimesordivide>

<https://nrich.maths.org/10478>

<https://wordwall.net/en-gb/community/multiplication-by-10-100-1000>



Key Instant Recall Facts YEAR 6 – Spring 2

I know the doubles and halves of 2 digit decimal numbers.

By the end of this half term, children should be able to double and halve any 2 digit decimal numbers. The aim is for them to recall these facts instantly.

Double

$$3.4 \rightarrow 6.8$$

$$3.5 \rightarrow 7.0$$

$$3.6 \rightarrow 7.2$$

Halves

$$8.4 \rightarrow 4.2$$

$$8.5 \rightarrow 4.25$$

$$8.6 \rightarrow 4.3$$

$$8.7 \rightarrow 4.35$$

What is $\frac{1}{2}$ of 0.38?



$$\frac{1}{2} \text{ of } 0.3 = 0.15$$



$$\frac{1}{2} \text{ of } 0.08 = 0.04$$



So $\frac{1}{2}$ of 0.38 must be 0.19!

KEY VOCABULARY and QUESTIONS

Multiply/ product/ times by /lots of/ share/ group /divide double/ near double/ twice /2 lots of 2/ times/ half halved /divided by 2/ shared between 2 group/ in pairs

What is double 3.7? Explain how you know

How do you double/halve a number?

Show me 1s double 6.2, 12.4?

Prove it!

Things to Try

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.

Play number ping pong! - Start of saying 'ping', child replies with 'pong'. Repeat and then convert to numbers i.e. say 3.9 and they reply '7.8'. Or say, '7.8' and they say '3.9'

Timed Challenges - How well are you doing? How many questions can you answer in 2 minutes? Can you beat your own record?

HELPFUL HINTS:

Create regular opportunities for rapid fire questions where an instant correct answer is required

- Encourage children to use what they already know, for example the 6x table is double the 3x table!

- Practise halving at least as often as doubling

Useful Websites:

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

<https://www.topmarks.co.uk/maths-games/daily10> Choose level 6 and double/halves

<https://mathsticks.com/my/wp-content/uploads/2015/02/lb-doubles-halves-prime.pdf>