Key Instant Recall Facts

I know the number bonds for 100.

By the end of this half term, children should know addition and subtraction facts for 100.   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.

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.

Buy one get three free - If your child knows one fact (e.g. 28 + 72 = 100), 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?

Key Instant Recall Facts

Year 4 – Autumn 1

Make it fun!

▸ Timed Games: How well are you doing? How many questions can you answer in 2 minutes. Can you beat your own record?

▸ http://www.conkermaths.org/cmweb.nsf/products/conkerkirfs.html Game 11 – How many can you answer in 90 seconds?

▸ http://www.topmarks.co.uk/maths-games/hit-the-button Make 100

▸ http://www.snappymaths.com/addsub/make100/interactive/make100imin/make100imin.htm Make 100

▸ http://www.wldps.com/gordons/Bingo_-_make_amounts.swf Choose make 100

▸ Games at www.SumDog.com

Broaden and apply

http://www.wldps.com/gordons/Loop_cards.swf interactive loop cards

□□ + □□ + □□ = 100 How many ways can you find?

http://nrich.maths.org/11819 Can you make 100?

http://nrich.maths.org/1130 Reach 100

http://nrich.maths.org/2006 Investigate the deca tree

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?

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

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

Key Instant Recall Facts

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

Key Instant Recall Facts

Year 4 – Autumn 2

Make it fun!

➤ 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.

➤ http://www.conkermaths.org/cmweb.nsf/products/conkerkirfs.html 6 x tables

➤ http://www.topmarks.co.uk/maths-games/hit-the-button x 6

➤ http://www.oswego.org/ocsd-web/games/mathmagician/mathsmulti.html x 6

➤ Play number ping pong! Start by saying 'ping', child replies with 'pong'. Repeat with times tables facts i.e. say '9' and they reply '54'

➤ Test the Parent – Your child can make up their own tricky division questions for you e.g. What is 42 divided by 6? They need to be able to multiply to create these questions.

➤ Timed Games: How well are you doing? How many questions can you answer in 2 minutes. Can you beat your own record?

➤ Games at www.multiplication.com and www.SumDog.com

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

Broaden and apply

http://www.snappymaths.com/multdiv/6xtable/interactive/mult6imm/mult6imm.htm   Can you recognise the multiples of 6?

http://www.snappymaths.com/multdiv/6xtable/interactive/countin6scont/countin6scont.htm   Counting in 6's (How far can you go?)

True or false? $7 \times 6 = 7 \times 3 \times 2$ $7 \times 6 = 7 \times 3 + 3$ Explain your reasoning.

Can you write the number 30 as the product of 3 numbers? Can you do it in different ways?

Key Instant Recall Facts

Year 4 – Spring 1

Key Instant Recall Facts

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 × 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

They should be able to answer these questions in any order, including missing number questions e.g. $9 \times \bigcirc = 54$ or $\bigcirc \div 9 = 11$.

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 of the day

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!

Key Instant Recall Facts

Key Instant Recall Facts

Year 4 – Spring 1

Make it fun!

- 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.

- http://www.conkermaths.org/cmweb.nsf/products/conkerkirfs.html 3x,6x and 9 x tables

- http://www.topmarks.co.uk/maths-games/hit-the-button   x 9

- http://www.oswego.org/ocsd-web/games/mathmagician/mathsmulti.html x 9

- http://www.snappymaths.com/multdiv/11xtable/interactive/countin11s/countin11s.htm Counting in 11's - How far can you go?

- Play number ping pong! Start by saying 'ping', child replies with 'pong'. Repeat with times tables facts i.e. say '9' and they reply '99'

- Test the Parent – Your child can make up their own tricky division questions for you e.g. What is 121 divided by 11? They need to be able to multiply to create these questions.

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

- Games at www.multiplication.com and www.SumDog.com

Broaden and apply

http://www.snappymaths.com/multdiv/11xtable/interactive/mult11imm/mult11imm.htm   Can you recognise the multiples of 11?

http://nrich.maths.org/5429   Multiples grid investigation

Sally has 9 times as many football cards as Sam. Together they have 150 cards. How many more cards does Sally have than Sam?

Is it always, sometimes or never true that when you add two multiples of 11, the answer is also a multiple of 11. Explain your answer.

Key Instant Recall Facts

Year 4 – Spring 2

I can recognise decimal equivalents of fractions.

Children should be able to convert between decimals and fractions for ½, ¼, ¾ and **any number of tenths and hundredths.**

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

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

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

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

$\frac{2}{10} = 0.2$

$\frac{5}{10} = 0.5$

$\frac{6}{10} = 0.6$

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

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

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

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

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

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

Use time wisely.

Key Instant Recall Facts

Top Tips

The secret to success is practising **little** and **often**

Can you practise these KIRFs while walking to schoo[ ] journey?

You don't need to practise them all at once: perhaps [ ] the day.

Key Instant Recall Facts

Year 4 – Spring 2

Key Instant Recall Facts

Make it fun!

▸ Count up and down in tenths and hundredths, counting out loud

▸ 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.

▸ http://www.snappymaths.com/counting/decimals/interactive/w10th100thdec/w10th100thdec.htm   Write hundredths as decimals

▸ http://www.wldps.com/gordons/F_D_P_balance.swf Choose decimal to fraction option

▸ http://nrich.maths.org/1249   Matching fractions and decimals

▸ http://www.sheppardsoftware.com/mathgames/fractions/FractionsToDecimals.htm

▸ http://www.bbc.co.uk/bitesize/ks2/maths/number/fractions_to_decimals/play/

Broaden and apply - enrichment

http:// www.snappymaths.com/counting/decimals/interactive/underlineddigdec3dp/underlineddigdec3dp.htm   Give value of the digit

Write a decimal numbers (to one decimal place) which lies between a half and three quarters? How many more can you find?

Write a fraction with a denominator of one hundred which has a value of more than 0.75? … and another, … and another, …

Is it always, sometimes or never true that if the numerator is half the denominator then the fraction is equivalent to 0.5? Explain your answer.

Key Instant Recall Facts

How many ways can you complete this? What's the
same

$\frac{\square}{\square}$

0.25 =

or different each time and why?

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 × 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?

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

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?

Key Instant Recall Facts

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.

Key Instant Recall Facts

Year 4 – Summer 1

Make it fun!

▸ 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.

▸ http://www.conkermaths.org/cmweb.nsf/products/conkerkirfs.html 7 x tables

▸ http://www.topmarks.co.uk/maths-games/hit-the-button x 7

▸ http://www.oswego.org/ocsd-web/games/mathmagician/mathsmulti.html x 7

▸ Play number ping pong! Start by saying 'ping', child replies with 'pong'. Repeat with times tables facts i.e. say '9' and they reply '63'

▸ Test the Parent – Your child can make up their own tricky division questions for you e.g. What is 42 divided by 7? They need to be able to multiply to create these questions.

▸ Timed Games: How well are you doing? How many questions can you answer in 2 minutes. Can you beat your own record?

▸ Games at www.multiplication.com and www.SumDog.com

▸ http://www.snappymaths.com/multdiv/7xtable/interactive/7xdivimin/7xtabdivimin.htm Division facts

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

Broaden and apply

http://www.snappymaths.com/multdiv/7xtable/interactive/mult7imm/mult7imm.htmCan you recognise the multiples of 6?

http://www.snappymaths.com/multdiv/7xtable/interactive/countin7scont/countin7scont.htm   Counting in 7's (How far can you go?)

http://www.wldps.com/gordons/Loop_cards.swf   Interactive loop card problem

True or false? 7 × 6 = 7 × 3 × 2 7 × 6 = 7 × 3 + 3 Explain your reasoning.

Key Instant Recall Facts

Can you write the number 30 as the product of 3 numbers? Can you do it in different ways?

Key Instant Recall Facts

Year 4 – Summer 2

I can multiply and divide one and two digit numbers by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths.

By the end of this half term, children should be able to work out the following facts and other similar facts.

$7 \times 10 = 70$	$6 \times 100 = 600$	
$4 \times 10 = 40$	$4 \times 100 = 400$	
$56 \times 10 = 560$	$48 \times 100 = 4800$	
$73 \times 10 = 730$	$62 \times 100 = 6200$	
$80 \div 10 = 8$	$70 \div 100 = 0.7$	$50 \div 10 = 5$	20
$\div 100 = 0.2$		
$3 \div 10 = 0.3$	$56 \div 100 = 0.56$	
$9 \div 10 = 0.9$	$48 \div 100 = 0.48$	
$28 \div 10 = 2.8$	$4 \div 100 = 0.04$	$45 \div 10 = 4.5$	6
$\div 100 = 0.06$		

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. $10 \times \bigcirc = 5$ or $\bigcirc \div 10 = 60$.

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 of the day.

Key Instant Recall Facts

Year 4 – Summer 2

Key Instant Recall Facts

Make it fun!

- http://www.snappymaths.com/counting/decimals/interactive/div1dby10100/div1dby101000.htm   divide by 10 or 100

- http://www.iboard.co.uk/iwb/Place-Value-Shifter-1373 A useful tool to show the effect of multiplying or dividing by 10 and 100

- http://kids.britannica.com/lm/games/GM_5_5/GM_5_5.htm

- http://www.snappymaths.com/counting/decimals/resources/div1dby10.pdf
dividing 1 digit by 10 worksheet

- http://www.snappymaths.com/counting/decimals/resources/div1dby100.pdf
dividing 1 digit by 100 worksheet

- Play number ping pong! Start by saying 'ping', child replies with 'pong'. Repeat with numbers i.e. say '9' and they reply '0.9' (for divide by 10)

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

Broaden and apply

I divide a number by 100 and the answer is 0.3. What number did I start with?

Write down a number with one decimal place which when multiplied by 10 gives an answer between 120 and 130. ... and another, ... and another, ...

Is it always, sometimes or never true that multiplying a number by 10 makes it bigger? Explain your answer.

http://www.topmarks.co.uk/Flash.aspx?f=BingoMultiplicationv9   Try applying it to tables questions

http://www.topmarks.co.uk/Flash.aspx?f=inversemachinev3   Investigate the different inverse relationships