



Year 4 Key instant recall facts (KIRFs)

Autumn 1

Know all number bonds for 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:

$60 + 40 = 100$	$37 + 63 = 100$
$40 + 60 = 100$	$63 + 37 = 100$
$100 - 40 = 60$	$100 - 63 = 37$
$100 - 60 = 40$	$100 - 37 = 63$

$75 + 25 = 100$	$48 + 52 = 100$
$25 + 75 = 100$	$52 + 48 = 100$
$100 - 25 = 75$	$100 - 52 = 48$
$100 - 75 = 25$	$100 - 48 = 52$

Key vocabulary

What do I add to 65 to make 100?

What is 100 take subtract 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. $49 + \bigcirc = 100$ or $100 - \bigcirc = 72$.

Use practical resources

- 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 top marks maths – hit the button. See how many questions you can answer in just 90 seconds. There is also a number bond pair game to play.

Roman numerals to 100.

1 I	11 XI	21 XXI	31 XXXI	41 XL I	51 LI	61 LXI	71 LXXI	81 LXXXI	91 XCI
2 II	12 XII	22 XXII	32 XXXII	42 XLII	52 LII	62 LXII	72 LXXII	82 LXXXII	92 XCII
3 III	13 XIII	23 XXIII	33 XXXIII	43 XLIII	53 LIII	63 LXIII	73 LXXIII	83 LXXXIII	93 XCIII
4 IV	14 XIV	24 XXIV	34 XXXIV	44 XLIV	54 LIV	64 LXIV	74 LXXIV	84 LXXXIV	94 XCIV
5 V	15 XV	25 XXV	35 XXXV	45 XLV	55 LV	65 LXV	75 LXXV	85 LXXXV	95 XCV
6 VI	16 XVI	26 XXVI	36 XXXVI	46 XLVI	56 LVI	66 LXVI	76 LXXVI	86 LXXXVI	96 XCVI
7 VII	17 XVII	27 XXVII	37 XXXVII	47 XLVII	57 LVII	67 LXVII	77 LXXVII	87 LXXXVII	97 XCVII
8 VIII	18 XVIII	28 XXVIII	38 XXXVIII	48 XLVIII	58 LVIII	68 LXVIII	78 LXXVIII	88 LXXXVIII	98 XCVIII
9 IX	19 XIX	29 XXIX	39 XXXIX	49 XLIX	59 LIX	69 LXIX	79 LXXIX	89 LXXXIX	99 XCIX
10 X	20 XX	30 XXX	40 XL	50 L	60 LX	70 LXX	80 LXXX	90 XC	100 C

Use practical resources

- <https://mathsframe.co.uk/en/resources/category/572>
- https://www.transum.org/software/SW/Starter_of_the_day/Students/Roman_Numerals.asp

Top tips:

The key to success is little and often. Use time wisely. Can you practise 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 any more ideas, please speak to your child's teacher.



Year 4 Key instant recall facts (KIRFs)

- BBC bitesize website

Autumn 2

Know multiplication and division facts for the 7x

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?

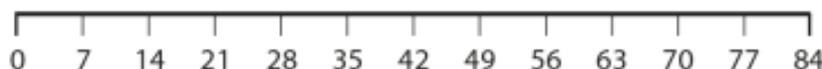
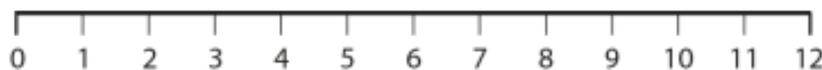
How many groups of 7 in 49?

Is 63 divisible by 7?

They should be able to answer these questions in any order, including missing number questions e.g. $7 \times \bigcirc = 28$ or $\bigcirc \div 6 = 7$.

Use practical resources

- 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.
- 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.
- Use memory tricks – For those hard-to-remember facts.
- Top marks – hit the button
- Remember fact families for instance 2,7,14 7,12,84
- <https://www.timestables.co.uk/games/>



Top tips:

The key to success is little and often. Use time wisely. Can you practise 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 any more ideas, please speak to your child's teacher.



Year 4 Key instant recall facts (KIRFs)

Spring 1

Know the decimal and percentage equivalents of the fractions $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$, tenths and hundredths

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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 any number of tenths and hundredths.

Use practical resources –

- 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://www.topmarks.co.uk/maths-games/7-11-years/fractions-and-decimals>
- <https://uk.ixl.com/maths/year-4/convert-fractions-to-decimals>

Know the number of weeks in a year.

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

52 weeks = 1 year

12 months = 1 year

Top tips:

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Year 4 Key instant recall facts (KIRFs)

Spring 2

Know all pairs of multiples of 50 with a total of 1000.

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

$0 + 1000 = 1000$	$1000 - 0 = 1000$
$50 + 950 = 1000$	$1000 - 50 = 950$
$100 + 900 = 1000$	$1000 - 100 = 900$
$150 + 850 = 1000$	$1000 - 150 = 850$
$200 + 800 = 1000$	$1000 - 200 = 800$
$250 + 750 = 1000$	$1000 - 250 = 750$
$300 + 700 = 1000$	$1000 - 300 = 700$
$350 + 650 = 1000$	$1000 - 350 = 650$
$400 + 600 = 1000$	$1000 - 400 = 600$
$450 + 550 = 1000$	$1000 - 450 = 550$
$500 + 500 = 1000$	$1000 - 500 = 500$

Key vocabulary

What makes 1000?

What must be added to 450 to make 1000?

What is 1000 subtract 350?

What is the difference of 1000 and 650?

How many more is 1000 than 800?

How many less is 600 than 1000?

Use practical resources –

- <https://classroom.thenational.academy/lessons/using-number-bonds-and-facts-related-to-1000-chhkqr>
- <https://primaryleap.co.uk/activity/number-bonds-to-1000/level-1>
- *Top marks maths – hit the button*

Know $m = km$ $Cm = m$

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

1000 metres = 1 Kilometre (1000 m = 1 Km)

100 centimetres = 1 metre (100 cm = 1m)

Top tips:

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Year 4 Key instant recall facts (KIRFs)

Summer 1

Know multiplication and division facts for the 11 and 12x

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

$0 \times 11 = 0$
$1 \times 11 = 11$
$2 \times 11 = 22$
$3 \times 11 = 33$
$4 \times 11 = 44$
$5 \times 11 = 55$
$6 \times 11 = 66$
$7 \times 11 = 77$
$8 \times 11 = 88$
$9 \times 11 = 99$
$10 \times 11 = 110$
$11 \times 11 = 121$
$12 \times 11 = 132$

Use practical resources-

- 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.
- 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.

- Use memory tricks – For those hard-to-remember facts.
- Top marks – hit the button
- Remember fact families for instance 10,11,110
8,12,96
- <https://www.timestables.co.uk/games/>

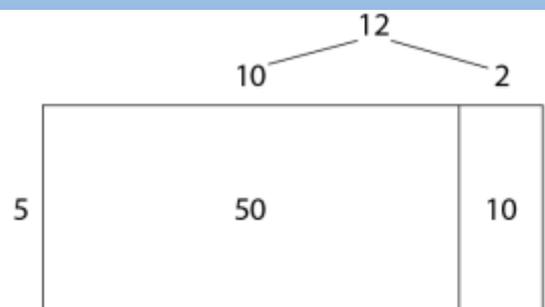
$0 \times 12 = 0$		5	6	7	8	9	10	11	12
$1 \times 12 = 12$	0	0	0	0	0	0	0	0	0
$2 \times 12 = 24$	1	5	6	7	8	9	10	11	12
$3 \times 12 = 36$	2	10	12	14	16	18	20	22	24
$4 \times 12 = 48$	3	15	18	21	24	27	30	33	36
$5 \times 12 = 60$	4	20	24	28	32	36	40	44	48
$6 \times 12 = 72$	5	25	30	35	40	45	50	55	60
$7 \times 12 = 84$	6	30	36	42	48	54	60	66	72
$8 \times 12 = 96$	7	35	42	49	56	63	70	77	84
$9 \times 12 = 108$	8	40	48	56	64	72	80	88	96
$10 \times 12 = 120$	9	45	54	63	72	81	90	99	108
$11 \times 12 = 132$	10	50	60	70	80	90	100	110	120
$12 \times 12 = 144$	11	55	66	77	88	99	110	121	132
	12	60	72	84	96	108	120	132	144

vocabulary

What is 12 multiplied by 11?

What is 108 divided by 12?

How many groups of 11 in 77?



Summer 2

Top tips:

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Year 4 Key instant recall facts (KIRFs)

Know all number bonds for £1 using decimal notation

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

$4 + 6 = 10$	$63 + 37 = 100$
$40 + 60 = 100$	$0.63 + 0.37 = 1.00$
$0.4 + 0.6 = 1$	$1.00 - 0.63 = 0.37$
$1 - 0.6 = 0.4$	
	$£0.63 + £0.37 = £1.00$
$£0.60 + £0.40 = £1.00$	$£1.00 - £0.37 = £0.67$
$£1.00 - £0.40 = £0.60$	
	$2 + 98 = 100$
$75 + 25 = 100$	$0.02 + 0.98 = 1.00$
$0.75 + 0.25 = 1.00$	$1.00 - 0.98 = 0.02$
$1.00 - 0.75 = 0.25$	
	$£0.02 + £0.98 = £1.00$
$£0.25 + £0.75 = £1.00$	$£1.00 - £0.02 = £0.98$
$£1.00 - £0.25 = £0.75$	

Key vocabulary

What do I add to 0.6 to make 1? What is 1 - 0.6?

What is £0.03 less than £1.00?

How many more £1.00 than £0.02?

What is the difference between £0.89 and £0.02?

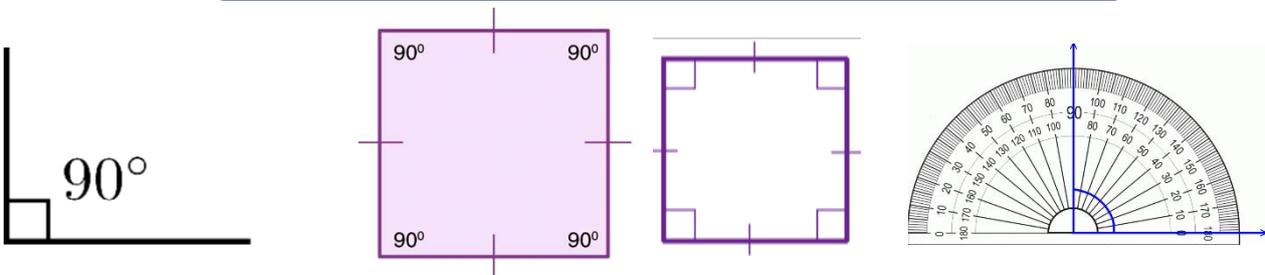
This list includes some examples of facts that children should know. They should be able to answer questions including missing number questions.

e.g. $0.49 + \square = 1$ or $£1.00 - \square = £0.72$

Use practical resources-

- Play if I know $45 + 55 = 100$ then what is $0.45 + 0.55$?
- <https://classroom.thenational.academy/lessons/decimal-number-bonds-c8vk4t>
- <https://www.math-salamanders.com/decimal-number-bonds-to-1.html>
- [Hit the Button - Quick fire maths practise for 6-11 year olds \(topmarks.co.uk\)](http://topmarks.co.uk)

Know 90° in a right angle



Top tips:

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