



Key Instant Recall Facts

Year 3 -



I know the number bonds for each number to 20.

By the end of this half term, children should know addition and subtraction facts for each number to 20. The aim is for them to recall these facts instantly.

$2 + 9 = 11$ $5 + 9 = 14$ Example of a fact family

$3 + 8 = 11$ $6 + 8 = 14$ $6 + 9 = 15$

$4 + 7 = 11$ $7 + 7 = 14$ $9 + 6 = 15$

$5 + 6 = 11$ $6 + 9 = 15$ $15 - 9 = 6$

$3 + 9 = 12$ $7 + 8 = 15$ $15 - 9 = 6$

$4 + 8 = 12$ $7 + 9 = 16$

Examples of other facts

$5 + 7 = 12$ $8 + 8 = 16$

$4 + 5 = 9$

$6 + 6 = 12$ $8 + 9 = 17$

$13 + 5 = 18$

$4 + 9 = 13$ $9 + 9 = 18$

$19 - 7 = 12$

$5 + 8 = 13$

$10 - 6 = 4$

$6 + 7 = 13$

Key Vocabulary

What do I **add** to 5 to make 19?

What is 17 **take away** 6?

What is 13 **less than** 15?

How many more than 8 is 11?

What is the **difference** between 9 and 13?

This list includes the most challenging facts but children will need to learn **all** number bonds for each number to 20 (e.g. $15 + 2 = 17$). This includes related subtraction facts (e.g. $17 - 2 = 15$).

Top Tips

The secret to success is practising **little** and **often**. Use time wisely.



Key Instant Recall Facts

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. $8 + 5 = 13$), can they tell you the other three facts in the same fact family?

Use doubles and near doubles - If you know that $6 + 6 = 12$, how can you work out $6 + 7$? What about $5 + 7$?

Year 3 - Autumn 1

Make it fun!

- ▶ Use practical resources - Make collections of up to 20 objects. Show some and ask questions such as, "How many more would I need to make"?
Cover some objects and ask how many are hidden.
- ▶ <http://www.conkermaths.org/cmweb.nsf/products/conkerkirfs.html> Game 3 - number bonds for each number to 20
- ▶ <http://www.topmarks.co.uk/maths-games/hit-the-button> Addition or subtraction within 20
- ▶ <http://www.primarygames.com/math/mathtilesaddition0to20/>
- ▶ http://www.wldps.com/gordons/Loop_cards.swf interactive loop cards
- ▶ 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.SumDog.com



Key Instant Recall Facts

Year 3 -

Broaden and apply

Captain Conjecture says, 'If you add 6 to a number ending in 7 you will always get a number ending in 3.' Is he correct? Explain your answer.

Is it always, sometimes or never true that a number less than 10 added to another number less than 10 = a number less than 10. How do you know?

$3 + \square = \square - 7$ how many ways can this be true using numbers less than 20?

<http://nrich.maths.org/11114> Totality

<http://nrich.maths.org/53> Roll those Dice

<http://nrich.maths.org/10091> Strike it out

Autumn 2

I know the multiplication and division facts for the 3 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.

$3 \times 1 = 3$

$1 \times 3 = 3$

$3 \div 3 = 1$

$3 \div 1 = 3$

$3 \times 2 = 6$

$2 \times 3 = 6$

$6 \div 3 = 2$

$6 \div 2 = 3$

$3 \times 3 = 9$

$3 \times 3 = 9$

$9 \div 3 = 3$

$9 \div 3 = 3$

$3 \times 4 = 12$

$4 \times 3 = 12$

$12 \div 3 = 4$

$12 \div 4 = 3$

$3 \times 5 = 15$

$5 \times 3 = 15$

$15 \div 3 = 5$

$15 \div 5 = 3$

$3 \times 6 = 18$

$6 \times 3 = 18$

$18 \div 3 = 6$

$18 \div 6 = 3$

$3 \times 7 = 21$

$7 \times 3 = 21$

$21 \div 3 = 7$

$21 \div 7 = 3$

$3 \times 8 = 24$

$8 \times 3 = 24$

$24 \div 3 = 8$

$24 \div 8 = 3$

$3 \times 9 = 27$

$9 \times 3 = 27$

$27 \div 3 = 9$

$27 \div 9 = 3$

$3 \times 10 = 30$

$10 \times 3 = 30$

$30 \div 3 = 10$

$30 \div 10 = 3$

Key Vocabulary

What is 3 **multiplied by** 8?

What is 8 **times** 3?

What is 24 **divided by** 3?



Key Instant Recall Facts

$3 \times 11 = 33$

$11 \times 3 = 33$

$33 \div 3 = 11$

$33 \div 11 = 3$

$3 \times 12 = 36$

$12 \times 3 = 36$

$36 \div 3 = 12$

$36 \div 12 = 3$

They should be able to answer these questions in any order, including missing number questions e.g. $3 \times \bigcirc = 18$ or $\bigcirc \div 3 = 11$.

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.

Use what you already know: If your child knows that $7 \times 3 = 21$, they can use this fact to work out that $3 \times 7 = 21$ and that $21 \div 7 = 3$ and $21 \div 3 = 7$.

Buy one get three free - If your child knows one fact (e.g. $3 \times 5 = 15$), 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 goes first, as this will help your child more in later years when they study fractions, decimals and algebra. E.g. $3 \times 12 = 36$. The answer to the multiplication is 36, so $36 \div 3 = 12$ and $36 \div 12 = 3$

Year 3 - 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> 3 x tables
- ▶ <http://www.topmarks.co.uk/maths-games/hit-the-button> x 3
- ▶ <http://www.learnyourtables.co.uk/en/index2.htm> x3



Key Instant Recall Facts

Year 3 -

- ▶ Play number ping pong! Start by saying 'ping', child replies with 'pong'. Repeat with times tables facts i.e. say '9' and they reply '27'
- ▶ Test the Parent - Your child can make up their own tricky division questions for you e.g. What is 27 divided by 3? 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

Write this addition statement as a multiplication statement: $3 + 3 + 3 + 2 + 4$

<http://nrich.maths.org/1252> Multiplication Tables matching cards

□ × 3 = □ How many different answers can you make?

<http://www.wldps.com/gordons/Odd-one-out.swf> Which numbers are not multiples of 3?

Summer 1

I can recall facts about durations of time.

By the end of this half term, children should know and be able to recall the following facts.

There are 60 seconds in a minute. There are 60 minutes in an hour.

There are 24 hours in a day.

There are 7 days in a week.



Key Instant Recall Facts

There are 12 months in a year.

There are 365 days in a year.

There are 366 days in a leap year.

Number of days in each month

January	31	July	31
February	28/29	August	31
March	31	September	30
April	30	October	31
May	31	November	30
June	30	December	31

Children also need to know the order of the months in a year. They should be able to apply these facts to answer questions, such as:

What day comes after 30th April?

What day comes before 1st February?

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.

Year 3 Summer 1

Make it fun!

- ▶ Use rhymes and memory games- The rhyme, Thirty days hath September, can help children remember which months have 30 days. There are poems describing the months of the year in order.



Key Instant Recall Facts

Year 3 -

- ▶ Use calendars - If you have a calendar for the new year, your child could be responsible for recording the birthdays of friends and family members in it. Your child could even make their own calendar.
- ▶ How long is a minute? - Ask your child to sit with their eyes closed for exactly one minute while you time them. Can they guess the length of a minute? Carry out different activities for one minute. How many times can they jump in sixty seconds?
- ▶ <http://www.snappymaths.com/other/measuring/time/interactive/monthaftertotc.htm> Which month comes after ...?
- ▶ <http://www.snappymaths.com/other/measuring/time/interactive/orderunitsoftime/orderunitsoftime.htm> Order units of time
- ▶ <http://www.snappymaths.com/other/measuring/time/interactive/orderingmonths.htm/orderingmonths.htm> Order the months of the year
- ▶ http://www.learnalberta.ca/content/me3us/flash/lessonLauncher.html?lesson=lessons/13/m3_13_00_x.swf Explore the time tunnel
- ▶ <http://www.learnalberta.ca/content/me3usa/flash/index.html?goLesson=13> Mixed time resources

Broaden and apply - enrichment

<http://nrich.maths.org/165> How many days?

<http://nrich.maths.org/2488> Find the day of the week for any date

<http://nrich.maths.org/10322> Calendar Sorting



Key Instant Recall Facts

Spring 2

I know the multiplication and division facts for the 4 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.

$4 \times 1 = 4$	$1 \times 4 = 4$	$4 \div 4 = 1$	$4 \div 1 = 4$
$4 \times 2 = 8$	$2 \times 4 = 8$	$8 \div 4 = 2$	$8 \div 2 = 4$
$4 \times 3 = 12$	$3 \times 4 = 12$	$12 \div 4 = 3$	$12 \div 3 = 4$
$4 \times 4 = 16$	$4 \times 4 = 16$	$16 \div 4 = 4$	$16 \div 4 = 4$
$4 \times 5 = 20$	$5 \times 4 = 20$	$20 \div 4 = 5$	$20 \div 5 = 4$
$4 \times 6 = 24$	$6 \times 4 = 24$	$24 \div 4 = 6$	$24 \div 6 = 4$
$4 \times 7 = 28$	$7 \times 4 = 28$	$28 \div 4 = 7$	$28 \div 7 = 4$
$4 \times 8 = 32$	$8 \times 4 = 32$	$32 \div 4 = 8$	$32 \div 8 = 4$
$4 \times 9 = 36$	$9 \times 4 = 36$	$36 \div 4 = 9$	$36 \div 9 = 4$
$4 \times 10 = 40$	$10 \times 4 = 40$	$40 \div 4 = 10$	$40 \div 10 = 4$
$4 \times 11 = 44$	$11 \times 4 = 44$	$44 \div 4 = 11$	$44 \div 11 = 4$
$4 \times 12 = 48$	$12 \times 4 = 48$	$48 \div 4 = 12$	$48 \div 12 = 4$

Key Vocabulary

What is 4 **multiplied by** 6?

What is 8 **times** 4?

What is 24 **divided by** 4?

They should be able to answer these questions in any order, including missing number questions e.g. $4 \times \bigcirc = 16$ or $\bigcirc \div 4 = 7$.

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.

What do you already know? - Your child will already know many of these facts from the 2, 3, 5 and 10 times tables.



Key Instant Recall Facts

Year 3 -

Double and double again - Multiplying a number by 4 is the same as doubling and doubling again. Double 6 is 12 and double 12 is 24, so $6 \times 4 = 24$.

Buy one get three free - If your child knows one fact (e.g. $12 \times 4 = 48$), can they tell you the other three facts in the same fact family?

Year 3 - Spring 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> 4 x tables
- ▶ <http://www.topmarks.co.uk/maths-games/hit-the-button> x 4
- ▶ http://www.mad4maths.com/multiplication_table_math_games/ x 4
- ▶ Play number ping pong! Start by saying 'ping', child replies with 'pong'. Repeat with times tables facts i.e. say '9' and they reply '36'
- ▶ Test the Parent - Your child can make up their own tricky division questions for you e.g. What is 32 divided by 4? 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.



Key Instant Recall Facts

Broaden and apply

<http://www.snappymaths.com/multdiv/4xtable/interactive/mult4imm/mult4imm.htm> Can you recognise the multiples of 4?

<http://www.snappymaths.com/multdiv/4xtable/interactive/countin4shfcyg/countin4shfcyg.htm> Counting in 4's (How far can you go?)

http://www.wldps.com/gordons/Dart_Board_-_tables.swf Use input version

What is the relationship between these calculations?

3×4 , 4×8 , 4×3 , 8×4



Key Instant Recall Facts

Year 3 - Spring 1

I can tell the time to the nearest minute.

Children need to be able to tell the time using Key Vocabulary a clock with hands. This target can be broken down into several steps.

- ▶ I can tell the time to the nearest hour. **Quarter past three**
- ▶ I can tell the time to the nearest half **Quarter to nine hour.**
- ▶ I can tell the time to the nearest quarter hour. **Five past one**
- ▶ I can tell the time to the nearest five minutes. **Twenty-five to ten**
- ▶ I can tell the time to the nearest minute.



Top Tips

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

Discuss what time things happen:

- When does your child wake up?
- What time do they eat breakfast?
- What time do they go to school?
- What time is lunch?

Make sure that you have an analogue clock (with hands) visible in your house or that your child wears a watch with hands.



Key Instant Recall Facts

Ask your child the time regularly - You could also give your child some responsibility for watching the clock :

"The cakes need to come out of the oven at quarter past four."

"We need to leave the house at half past eight."

Year 3 - Spring 1

Make it fun!

- ▶ Play "What's the time Mr Wolf?"
- ▶ <http://tpet.co.uk/mrwolf/playfree.html> What time is it Mr Wolf? Set minute options first
- ▶ Read books about time eg:
 - The Clock Struck One: A Time-Telling Tale by Trudy Harris, Carrie Hartman
 - Cluck O'clock by Kes Gray
 - It's About Time. Stuart J. MurphyPlease ask your class teacher for suggestions of other books.
- ▶ <http://www.iboard.co.uk/iwb/Time-Reader-Analogue-466> An interactive clock which can be set and then says the time out loud
- ▶ <http://www.primarygames.com/math/skill/telling-time-math-games.php>
- ▶ <http://resources.oswego.org/games/BangOnTime/clockwordres.html> Stop the hands at the correct time
- ▶ <http://www.oswego.org/ocsd-web/games/StopTheClock/sthec4.html>
- ▶ <http://www.oswego.org/ocsd-web/games/StopTheClock/sthec5.html>



Key Instant Recall Facts

Broaden and apply - enrichment

How long is it until?

Jack says, 'There isn't any point in having a minute hand on a clock because I can still tell the time without it.' Do you agree with him? Explain your answer

<http://www.snappymaths.com/other/measuring/time/time.htm> useful worksheets

<http://nrich.maths.org/1981> 5 on the clock investigation

<http://nrich.maths.org/4806> Two clocks investigation

<http://nrich.maths.org/1002> Wonky watches investigation

Year 3 - Summer 2

I know the multiplication and division facts for the 8 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.

$8 \times 1 = 8$	$1 \times 8 = 8$	$8 \div 8 = 1$	$8 \div 1 = 8$
$8 \times 2 = 16$	$2 \times 8 = 16$	$16 \div 8 = 2$	$16 \div 2 = 8$
$8 \times 3 = 24$	$3 \times 8 = 24$	$24 \div 8 = 3$	$24 \div 3 = 8$
$8 \times 4 = 32$	$4 \times 8 = 32$	$32 \div 8 = 4$	$32 \div 4 = 8$
$8 \times 5 = 40$	$5 \times 8 = 40$	$40 \div 8 = 5$	$40 \div 5 = 8$
$8 \times 6 = 48$	$6 \times 8 = 48$	$48 \div 8 = 6$	$48 \div 6 = 8$
$8 \times 7 = 56$	$7 \times 8 = 56$	$56 \div 8 = 7$	$56 \div 7 = 8$
$8 \times 8 = 64$	$8 \times 8 = 64$	$64 \div 8 = 8$	$64 \div 8 = 8$
$8 \times 9 = 72$	$9 \times 8 = 72$	$72 \div 8 = 9$	$72 \div 9 = 8$

Key Vocabulary

What is 8 **multiplied by** 6?

What is 8 **times** 8?

What is 24 **divided by** 8?



Key Instant Recall Facts

$8 \times 10 = 80$ $10 \times 8 = 80$ $80 \div 8 = 10$ $80 \div 10 = 8$

$8 \times 11 = 88$ $11 \times 8 = 88$ $88 \div 8 = 11$ $88 \div 11 = 8$

$8 \times 12 = 96$ $12 \times 8 = 96$ $96 \div 8 = 12$ $96 \div 12 = 8$

They should be able to answer these questions in any order, including missing number questions e.g. $8 \times \bigcirc = 16$ or $\bigcirc \div 8 = 7$.

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.

What do you already know? - Your child will already know many of these facts from the 2, 3, 5 and 10 times tables.

Buy one get three free - If your child knows one fact (e.g. $12 \times 8 = 96$), can they tell you the other three facts in the same fact family?

Double your fours - Multiplying a number by 8 is the same as multiply by 4 and then doubling the answer. $8 \times 4 = 32$ and double 32 is 64, so $8 \times 8 = 64$.

Five six seven eight - fifty-six is seven times eight ($56 = 7 \times 8$).

Year 3 - Summer 2

Make it fun!



Key Instant Recall Facts

- ▶ 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> 8 x tables
- ▶ <http://www.topmarks.co.uk/maths-games/hit-the-button> x 8
- ▶ <http://www.oswego.org/ocsd-web/games/mathmagician/mathsmulti.html> x 8
- ▶ Play number ping pong! Start by saying 'ping', child replies with 'pong'. Repeat with times tables facts i.e. say '9' and they reply '72'
- ▶ Test the Parent - Your child can make up their own tricky division questions for you e.g. What is 32 divided by 8? 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/8xtable/interactive/mult8imm/mult8imm.htm> Can you recognise the multiples of 8?

<http://www.snappymaths.com/multdiv/8xtable/interactive/countin8shfcyg/countin8shfcyg.htm> Counting in 8's (How far can you go?)

http://www.wldps.com/gordons/Dart_Board_-_tables.swf Use input version



Key Instant Recall Facts

Is it always, sometimes or never true: Multiples of 4 are also multiples of 8