



# Key Instant Recall Facts



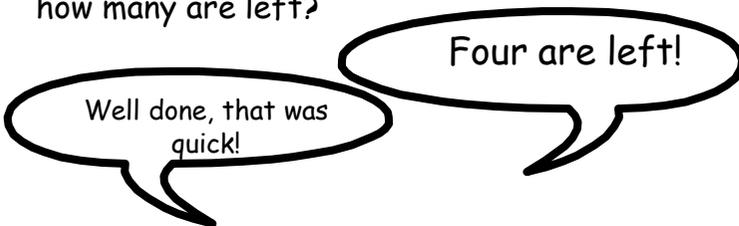
This half term your child is working towards achieving their individual KIRF target, indicated below. The ultimate aim is for your child to be able to recall these facts **instantly!**

Say the number names in order to 5	Know all the number bonds for numbers to 6	Know all the number bonds to 10	Know all the number bonds for <i>each</i> number to 10
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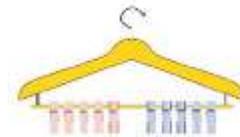
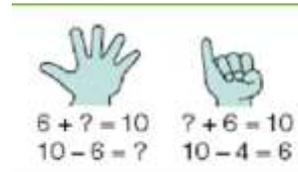
Example of number bonds to 5:



Five teddies are sitting on a shelf, 1 fell off, how many are left?



All number bonds to 10:



- 0 + 10 = 10
- 1 + 9 = 10
- 2 + 8 = 10
- 3 + 7 = 10
- 4 + 6 = 10
- 5 + 5 = 10
- 6 + 4 = 10
- 7 + 3 = 10
- 8 + 2 = 10
- 9 + 1 = 10
- 10 + 0 = 10

Building confidence in mathematics is important so be pleased with their efforts and always encourage with praise. Make sure these practice sessions are enjoyable - if your child is really not in the mood it is the wrong time to be practising!

## Helpful hints for parents

- Use objects to consider the bonds in a practical way.
- Look at the patterns with both objects and numbers e.g. as one number increases the other one decreases.
- Practise with the numbers in order and chosen randomly - remember the aim is for the child to be able to respond immediately.

### Key vocabulary

Add, Total, How many more to make?, Altogether

## Make it real!



There are 5 ladybirds on the leaf. Two fly away, how many are left?

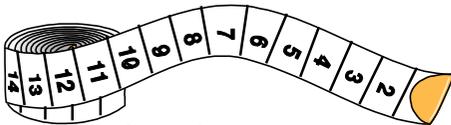
*3 ladybirds!  
How do you know?  
Well, 2 add 3 make  
5.*

I have 7p in my purse. How much more do I need to make 10p?



*3p!  
Why?  
Because 3p and 7p totals  
10p*

I have 18 cm of ribbon, I cut off 14 cm. How much ribbon is left?



*4 centimetres.  
Are you sure?  
Yes, because I know that 4 and 14 make 18  
altogether.*

## Make it fun!

### Call out!

Play number ping pong!

Start by saying 'ping', child replies with 'pong'.

Repeat and then convert to numbers i.e. say '2' and they reply '8' (number bonds to 10)

### What's hidden?

There are 5 beans on this plate, I hide some under a beaker - how many have I hidden?

### Playing cards:

Take out the picture cards from the deck of cards. Include the jokers as 'zero'.

- 1) Play snap by matching the number bonds.
- 2) Play the 'memory game' to find matching number bonds.

### Dominoes:

Connect two dominoes to make the bond.



### Songs and rhymes

e.g. 5 speckled frogs, 10 in a bed, 10 green bottles

### Timed Games:

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



# Key Instant Recall Facts



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**Know all number bonds for each number to 10**

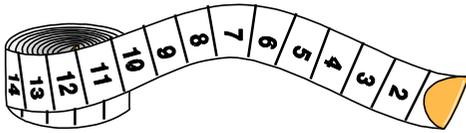
**Know all number bonds to 100 for multiples of 10**

**Know all number bonds to 100**

**Know all number bonds to multiples 20, 40, 50 etc up to 100**

**Know all number bonds to 1 and 10 using decimals**

Example of number bonds to 100:



I have a metre of string. I use 67cm to wrap my parcel.  
How much string is left?

Well done, that was quick!

33cm are left!

All decimal bonds to 1:

$$\begin{aligned}
 0.1 + 0.9 &= 1 \\
 0.2 + 0.8 &= 1 \\
 0.3 + 0.7 &= 1 \\
 0.4 + 0.6 &= 1 \\
 0.5 + 0.5 &= 1 \\
 0.6 + 0.4 &= 1 \\
 0.7 + 0.3 &= 1 \\
 0.8 + 0.2 &= 1 \\
 0.9 + 0.1 &= 1 \\
 1.0 + 0.0 &= 1
 \end{aligned}$$

Example of decimal bonds to 100 for multiples of 10:

$$\begin{aligned}
 60 + 40 &= 100; & 40 + 60 &= 100 \\
 \text{so} & & & \\
 100 - 60 &= 40; & 100 - 40 &= 60 \\
 & & & \\
 30 + 70 &= 100; & 70 + 30 &= 100 \\
 \text{so} & & & \\
 100 - 30 &= 70; & 100 - 70 &= 30
 \end{aligned}$$

Building confidence in mathematics is crucial so be pleased with their efforts and always encourage with praise. Make sure these practice sessions are enjoyable - if your child is really not in the mood it is the wrong time to be practising!

## Helpful hints for parents

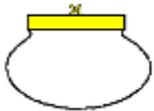
- Create regular, short opportunities for rapid fire questions where an instant correct answer is required
- Use objects to consider the bonds in a practical way
- Look at the patterns with both objects and numbers e.g. as one number increases the other one decreases
- Practise with the numbers in order and chosen randomly - remember the aim is for the child to be able to respond immediately

### Key vocabulary

How many more to make? altogether, make, sum, total, how much more is...than..., ...difference between

## Make it real!

Jack has £1, he spends 30p. How much change does he get?



70p!

Are you sure?

Yes, the sum of 70p and 30p is 100p - that's £1

If I put 65 pence into the piggy bank, how much more do I need to make a pound?



35 pence!

How did you work that out?

Well I know that 35 and 65 make 100 and there are 100 pennies in a pound!

## Make it fun!

### Call out!

Play number ping pong!

Start by saying 'ping', child replies with 'pong'.

Repeat and then convert to numbers i.e. say '0.3' and they reply '0.7' (decimal bonds to 1)

### What's hidden?

There are 17 beans on this plate, I hide some under a beaker - how many have I hidden? (bonds for each number to 20)

### Playing cards:

Remove picture cards and the 10s. Play snap treating each card as tenths. When you have a pair which total 1, shout snap and explain why e.g.  $0.2 + 0.8 = 1$

### Dice:

Roll two die treat them as the first as the tens digit and the second as the ones - ask how many more to make 100.

### Dominoes:

Pick a domino from a set facing down. Choose one side to represent the whole number and the other side to be the tenth. Ask how much more to make 10.

e.g. picture shows 5.2, so 4.8 more makes 10.



### Timed Games:

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

**Remember - a great place to think about capacity is in the bath!**



# Key Instant Recall Facts



This half term your child is working towards achieving their individual KIRF target, indicated below. The ultimate aim is for your child to be able to recall these facts **instantly!**

Begin to know the days of the week	Know the days of the week and the seasons and months of the year	Know multiplication and division facts for 2x table.	Know multiplication and division facts for 5x and 10x tables
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Example of 2 times table fact:

If I have 5 pairs of socks how many socks will I have?



Well done, that was quick!

10 socks!

$$2 \times 5 = 10$$



AND

$$5 \times 2 = 10$$



- $0 \times 10 = 0$
- $1 \times 10 = 10$
- $2 \times 10 = 20$
- $3 \times 10 = 30$
- $4 \times 10 = 40$

- $10 \div 10 = 1$
- $20 \div 10 = 2$
- $30 \div 10 = 3$
- $40 \div 10 = 4$

Building confidence in mathematics is crucial so be pleased with their efforts and always encourage with praise. Make sure these practice sessions are enjoyable - if your child is really not in the mood it is the wrong time to be practising!

## Helpful hints for parents

- Create regular opportunities for rapid fire questions where an instant correct answer is required
- Encourage children to look for patterns, such as all the answers end in 5 or 0 for the 5x table
- Chanting tables really does help. Make it fun by adding actions too or singing!
- Don't forget to chant those division facts too, they are often much harder to recall.

### Key vocabulary

times multiplied by lots of groups of multiple of divided by shared double half

## Make it real!



How many days are there in a week? Which day comes after Wednesday?

7 days in a week! Thursday!  
Well done - let's look on the calendar to see what we are doing on Thursday.

There are 2 buns in one row - how many buns will be in three rows?

6 buns!  
Great - how do you know?  
Because 3 times 2 is 6.



There are 20 stamps on a sheet. There are 5 stamps in a row, how many rows are there altogether?



4 rows!  
How did you work that out?  
Because I know 20 divided by 5 is 4.

**Many other things form an array like window panes, milk crates, stickers and wrapping paper!**

## Make it fun!

### Call out!

Play Fizz Buzz. To practice the 2 and 10 times tables together take it in turns to count in ones. If a number is in the 2x table say 'Fizz' instead of the number. Say 'Buzz' if it's in the 10's and 'Fizz Buzz' if it's in both.

### Sequencing

Cut up an old calendar. Ask children to order the months and talk about the seasons.

### Playing cards:

Remove picture cards from the pack. Pick a card and state the multiplication and division fact that the child is working on.  
eg Pick the '8' card; so  $5 \times 8 = 40$  and 40 divided by 5 = 8

### Dominoes:

Pick a domino, add the number of dots together then multiply by the table they are working on.

### Songs and rhymes

There are lots of CDs available with musical tables. Great fun to sing along to on long car journeys!



### Timed Games:

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



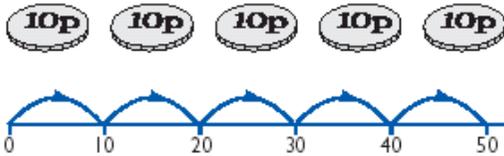
# Key Instant Recall Facts



This half term your child is working towards achieving their individual KIRF target, indicated below. The ultimate aim is for your child to be able to recall these facts **instantly!**

<b>Know multiplication and division facts for 5x and 10x tables</b>	<b>Know multiplication and division facts for the 4 and 8x tables</b>	<b>Consolidate multiplication and division facts for all times tables</b>	<b>Use all multiplication and division facts for the times tables up to 12x12, to derive x and ÷ of decimals numbers</b>
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How many 10 pence pieces make 50 pence?



five coins!

Well done, that was quick!

$$0 \times 7 = 0$$

$$1 \times 7 = 7$$

$$2 \times 7 = 14$$

$$3 \times 7 = 21$$

$$4 \times 7 = 28$$

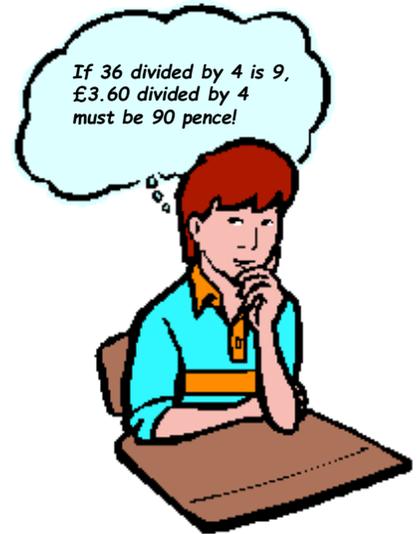
So...

$$7 \div 7 = 1$$

$$14 \div 7 = 2$$

$$21 \div 7 = 3$$

$$28 \div 7 = 4$$



Building confidence in mathematics is crucial so be pleased with their efforts and always encourage with praise. Make sure these practice sessions are enjoyable - if your child is really not in the mood it is the wrong time to be practising!

## Helpful hints for parents

- Create regular opportunities for rapid fire questions where an instant correct answer is required
- Encourage children use what they already know, for example the 6x table is double the 3x table!
- Chanting tables really does help. Make it fun by adding actions too or singing!
- Don't forget to chant those division facts too, they are often much harder to recall.

**Key vocabulary** times multiplied by lots of groups of multiple of divided by shared  
product divisible by factor square number

## Make it real!

A vending machine is broken and only takes 5p coins. How many coins do you need to pay for a bar of chocolate that costs 45p?

9 coins!

How did you work that out?

Well, the product of 9 and 5 is 45.

There are 7 smarties on each bun, if we make 6 buns how many smarties will we need?

42 smarties!

Can you explain why?

7 lots of 6 are 42.



A piece of ribbon measure 56cm in total. 8 cm are needed to make a bow. How many bows can we make?



7 bows!

Can you prove it to me?

Well there are seven, eights in 56.

**Encourage children to use doubling to work out their 8x table if they already know their 4x table. Equally if you know your 8x table, then the 0.8x table follows the same pattern!**

## Make it fun!

**Call out!**

Play Fizz Buzz. To practice the 5 and 8 times tables together take it in turns to count in ones. If a number is in the 5 x table say 'Fizz' instead of the number. Say 'Buzz' if it's in the 8's and 'Fizz Buzz' if it's in both.

**What's hidden?**

Use a multiplication square, hide some of the facts. Ask your child what is missing and why?

**Playing cards:**

Remove picture cards from the pack. Pick a card and treat the number as tenths. State the multiplication and division fact that the child is working on.

e.g. Pick the '8' card

so  $7 \times 0.8 = 5.6$  and  $5.6$  divided by 7 is 0.8



**Dominoes:**

Pick a domino, add the number of dots together then multiply by the table they are working on. To extend to all times tables, pick two dominoes to multiply the total number of dots on each together.

**Songs and rhymes**

There are lots of CDs available with musical tables. Great fun to sing along to on long car journeys!

**Timed Games:**

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



# Key Instant Recall Facts



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Say the numbers in order to 10	Know all number bonds to 10	Know multiplication and division facts for 10x table	Know multiplication and division facts for 2x and 4x table
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If there are 10 pencils in the packet and I take 7 out, how many are left?



3 pencils are left

Well done, that was quick!

$$0 \times 10 = 0$$

$$1 \times 10 = 10$$

$$2 \times 10 = 20$$

$$3 \times 10 = 30$$

$$4 \times 10 = 40$$

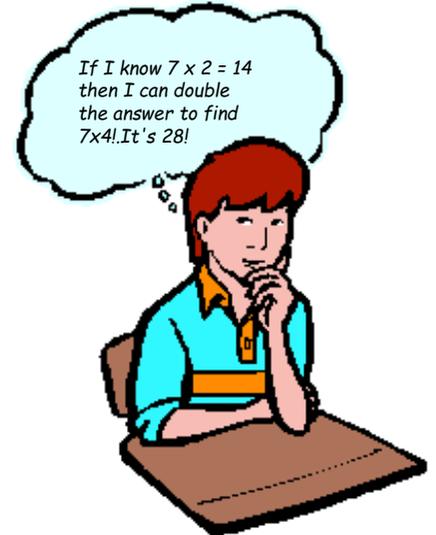
So...

$$10 \div 10 = 1$$

$$20 \div 10 = 2$$

$$30 \div 10 = 3$$

$$40 \div 10 = 4$$



Building confidence in mathematics is crucial so be pleased with their efforts and always encourage with praise. Make sure these practice sessions are enjoyable - if your child is really not in the mood it is the wrong time to be practising!

## Helpful hints for parents

- Look at the patterns with both objects and numbers e.g. as one number increases the other one decreases.
- Practise with the numbers in order and chosen randomly - the aim is for the child to be able to respond immediately.
- Chanting tables really does help. Make it fun by adding actions too or singing!
- Don't forget to chant those division facts too, they are often much harder to recall.

### Key vocabulary

	Add	Total	How many more to make?	Altogether				
times	multiplied by	lots of	groups of	multiple of	divided by	shared	double	half

## Make it real!

If there are 14 socks in the wash baskets. How many pairs will there be?



7 pairs!  
How do you know?  
Double 7 is 14.

For a party we have four 2 litre bottles of pop. How many litres do we have altogether?

8 litres!  
How do you know?  
Two multiplied by four is eight.

There are 4 children in the paddling pool, how many toes are there?

40 toes!  
How come?  
4 times 10 is 40.



Six children have 4p each. How much will they have altogether?



24p!  
How did you work that out?  
Six lots of four pence is  
24p.

**Encourage children to use doubling to work out their 4x table if they already know their 2x table. To work out 4x table facts, double and double again!**

## Make it fun!

### Call out!

Use a puppet or favourite teddy to count to 10, making a mistake. Can the child spot the mistake and explain what is wrong - then count along correctly with you.



### What's hidden?

Play bunny ears! Parent to hold up 4 fingers to make 'ears'. Child makes ears with 6 fingers. (bonds to 10)

### Playing cards:

Remove picture cards from the pack. Pick a card and state the multiplication and division fact that the child is working on.

e.g. Pick the '8' card; so  $4 \times 8 = 32$  and  $32$  divided by  $4 = 8$

### Dice:

Roll two die, find the total. The child multiplies the total by 2, 4 or 10. Can they also say the associated division fact?

### Songs and rhymes

There are lots of CDs available with musical tables. Great fun to sing along to on long car journeys!

Songs to support number bonds to 10 in a bed, 10 green bottles



### Timed Games:

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



# Key Instant Recall Facts



This half term your child is working towards achieving their individual KIRF target, indicated below. The ultimate aim is for your child to be able to recall these facts **instantly!**

Know multiplication and division facts for 2x and 4x table

Know all 2-digit pairs that total 100

Know the doubles and halves of all two-digit numbers

Know doubles and halves of 2-digit decimals

Know the prime numbers within 50

If there are 4 wheels on a skateboard, how many wheels will there be on 4 skateboards?



Sixteen wheels!

Well done, that was quick!

Double

$34 \rightarrow 68$

$35 \rightarrow 70$

$36 \rightarrow 72$

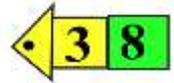
Halves

$84 \rightarrow 42$

$85 \rightarrow 42 \frac{1}{2}$  or 42.5

$86 \rightarrow 43$

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



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



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

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

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## Helpful hints for parents

- 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!
- When children are confident with doubles ask them to find the corresponding halves
- Practise halving at least as often as doubling. This will help children with subtraction at a later date

### Key vocabulary

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

## Make it real!

A piece of ribbon measuring 63 cm is cut from a piece which is a metre long. How much ribbon is left?

37cm!

Can you tell me why?

I know 63 and 37 make 100 - there are 100cm in a metre



Two tickets cost £67, how much would one ticket cost?



£33.50

How do you know?

I know because half of 60 is 30 and half of 7 is 3.5

The swimming pool is 3.7km away. How far will we travel there and back?



7.4km

Can you explain?

Well, double 3 is 6 and double 0.7 is 1.4 which makes 7.4 altogether

**If children are finding decimals tricky relating questions to money makes it much easier to understand.**

## Make it fun!

### Call out!

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' (double 2 digit decimal) Or say, '7.8' and they say '3.9'

### Money:

Show children a set of coins, children work out the value of the coins and say how much more is needed to make a pound.

### Playing cards:

Remove picture cards from the pack. Pick a card, state the multiplication and division fact that the child is working on.

e.g. Pick the '8' card

so  $4 \times 8 = 32$  and  $32$  divided by  $4$  is  $8$



### Dominoes:

Pick a domino



This domino could represent 0.52 or 5.2 or 52. Use any of these numbers to double or halve

### Songs and rhymes

As well as commercial CDs children enjoy inventing their own clapping games and chants linked to the times tables

### Timed Games:

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



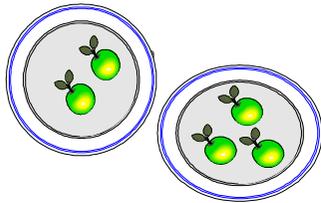
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<p>Be able to partition numbers to 5 into two groups</p>	<p>Know all doubles and halves to 10</p>	<p>Know the doubles and halves of all numbers to 20</p>	<p>Know doubles and halves of: All whole numbers to 20 All multiples of 10 to 500 All multiples of 100 to 5000</p>
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If I have 5 apples and two plates how many apples can I put on each plate?



2 on one plate  
3 on the other

Well done! Can you do it another way?

Double
1 → 2
2 → 4
3 → 6
Halves
20 → 10
19 → 9½
18 → 9

Example of doubles and halves of multiples of 100:

What is half of 360?



1/2 of 300 = 150



1/2 of 60 = 30

So half of 360 must be 180!

Building confidence in mathematics is crucial so be pleased with their efforts and always encourage with praise. Make sure these practice sessions are enjoyable - if your child is really not in the mood it is the wrong time to be practising!





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This half term your child is working towards achieving their individual KIRF target, indicated below. The ultimate aim is for your child to be able to recall these facts **instantly!**

<p><b>Know all multiplication and division facts for 3x, 6x and 9x table</b></p>	<p><b>Know all multiplication and division facts for all tables up to 10 x 10</b></p>	<p><b>Know all multiplication and division facts up to 12 x 12</b></p>	<p><b>Know square numbers to 12 x 12</b></p>	<p><b>Know the square roots of square numbers to 12 x 12</b></p>
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If you can cut a cake into 6 slices, how many cakes would you need to buy if there were 18 people coming to the party?



3 cakes!

Well done, that was quick!

$7 \times 3 = 21$	$3 \times 7 = 21$
$21 \div 7 = 3$	$21 \div 3 = 7$

**Remember, when you know 1 fact, you also know 3 more!**

**RULE:** A whole number is divisible by 2 if the last digit is 0, 2, 4 6 or 8.

**RULE:** A whole number is divisible by 3 if the sum of its digits is divisible by 3

Let's try!

7314 ...yes because  $7+3+1+4= 15$ , which is divisible by 3

**RULE:** A whole number is divisible by 5 if the last digit is 0 or 5

**RULE:** A whole number is divisible by 9 if the sum of its digits is divisible by 9

Let's try ...

437 ... no, because  $4 + 3 + 7 = 14$  which isn't divisible by 9

738... yes, because  $7 + 3 + 8 = 18$  which is divisible by 9

**RULE:** A whole number is divisible by 10 if the last digit is 0

Building confidence in mathematics is crucial so be pleased with their efforts and always encourage with praise. Make sure these practice sessions are enjoyable - if your child is really not in the mood it is the wrong time to be practising!

## Helpful hints for parents

- Encourage children to use doubling to link tables such as 2s, 4s, and 8s
- Look for patterns in the tables, for example in the 9 times table the digit sum is always 9!
- Chanting tables really does help. Make it fun by adding actions too or singing!
- Don't forget to chant those division facts too, they are often much harder to recall

**Key vocabulary** times multiplied by lots of groups of multiple of divided by shared product  
divisible by factor square number quotient

## Make it real!

A back yard is 8 metres long and 4 metres wide. What is the total area?

32 metres squared!  
How do you know?  
Because 4 multiplied by 8 is 32.



A recipe for a cake requires three tablespoons of honey. If I make 6 cakes for a school fete, how many tablespoons will I need?



18 tablespoons!  
Why?  
The product of 3 and 6 is 18.

We go on holiday in 7 weeks time. How many days are left until we go? How many school days are left?

49 days and 35 school days!  
Why?  
There are 7 days in a week so 7 times 7 is 49.  
We only go to school for 5 days, so five seven's are 35.



## Make it fun!

### Call out!

Play 'Beat the calculator'. One person works out the answer to a multiplication or division question (similar to those above) with a calculator and one person works them out in their head. Who is the quicker?

### Dice?

Roll a dice and generate a two-digit, three-digit or four-digit number. Children discuss whether the number is divisible by 2, 3, 5, 9 or 10.



### Playing cards:

Remove picture cards from the pack. Pick a card and state the multiplication and division fact that the child is working on.  
eg Pick the '9' card; so  $9 \times 7 = 63$  and  $63$  divided by  $7 = 9$

### Dominoes:

To practice the 8 times table, for example, pick a domino and add the dots. The child multiplies the total by 8. The child should also give the associated division fact.



### Songs and rhymes

There are lots of CDs available with musical tables. Great fun to sing along to on long car journeys!

### Timed Games:

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

**Remember to work out a tricky multiplication use what you already know! So to work out  $6 \times 8$ : "we might know  $6 \times 4 = 24$  and then double it to make 48"**



# Key Instant Recall Facts



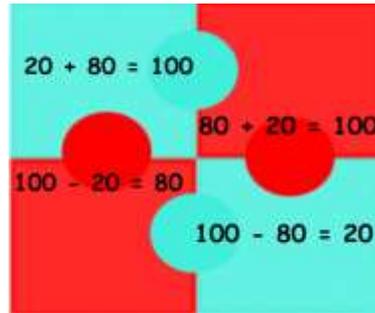
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Count in 10s	Know all addition and subtraction facts for all numbers between 0 and 10	Know all addition and subtraction facts for multiples of 10 to 100	Know all addition and subtraction facts for: Multiples of 100 to 1000 Multiples of 5 with a total of 100 Number pairs that total 100
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If we cut the pizza into 6 pieces and we eat 4 how many pieces will be left?



Remember, when you know 1 fact, you also know 3 more!



e.g.  
 $200 + 800 = 1\ 000$ ;  $800 + 200 = 1\ 000$   
 so  
 $1\ 000 - 800 = 200$ ;  $1\ 000 - 200 = 800$

$35 + 65 = 100$ ;  $65 + 35 = 100$   
 so  
 $100 - 65 = 35$ ;  $100 - 35 = 65$

$27 + 73 = 100$ ;  $73 + 27 = 100$   
 so  
 $100 - 27 = 73$ ;  $100 - 73 = 27$

Building confidence in mathematics is crucial so be pleased with their efforts and always encourage with praise. Make sure these practice sessions are enjoyable - if your child is really not in the mood it is the wrong time to be practising!

## Helpful hints for parents

- Remember to count backwards at least as many times as forwards as this is what children find most difficult
- Remind children that if they know  $6 + 3 = 9$  they also know that  $3 + 6 = 9$ ,  $60 + 30 = 90$  and that  $600 + 300 = 900$
- List pairs of numbers. Jot the opposite statements alongside e.g.  $17 + 13 = 30$   $13 + 17 = 30$

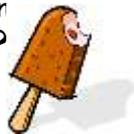
### Key vocabulary

How many more to make? altogether make sum total add how much more is...than...? ...difference between

## Make it real!

We have eaten 3 ice lollies and there are 5 left in the box. How many were in the box to start with?

8 lollies!  
How do you know?  
I know because 3 plus 5 makes 8!



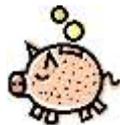
We invited 30 children to the party but 4 children can't come. How many children will be at the party?

26 children!  
Why?  
Because 30 take away 4 is 26!



If I put 65 pence into the piggy bank, how much more do I need to make a pound?

35 pence!  
How did you work that out?  
Well I know that 35 and 65 make 100 and there are 100 pennies in a pound!



There are 100 pages in my book. If I have read 66 pages, how many more do I need to read?

34 pages  
Why?  
Because 66 plus 34 makes 100!



## Make it fun!



### Call out!

Tap a number of regular beats. Ask

the child to count silently in tens, calling out the number you stop on.

### What's Hidden?

Have a bag of twenty 5 pence pieces. The child can select a random number and quickly call out the change from a pound which is hidden in the bag.

### Playing cards:

Remove the picture cards from the pack. Pick 2 cards and use one to represent the tens and the other to represent the unit.

e.g. pick '3' card and '6' card making the number 36

Ask the child to find another pair to make the total a multiple of 10 such as 90, 80, 70 etc



### Dominoes:

Pick a domino from a set facing down. Choose one end to represent the tens and the other to be the unit. Ask how much more is needed to make 60, 70, 80 etc.

e.g. picture shows 52 - so answer would be 8, 18, 28

### Timed Games:

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



# Key Instant Recall Facts



This half term your child is working towards achieving their individual KIRF target, indicated below. The ultimate aim is for your child to be able to recall these facts **instantly!**

<p>Know all addition and subtraction facts for:          Multiples of 100 to 1000          Multiples of 5 with a total of 100          Number pairs that total 100</p>	<p>Know all pairs of multiples of 50 with a total of 1000</p>	<p>Know all pairs of factors of numbers up to 100</p>	<p>Know the tests for divisibility for 4 and 6</p>	<p>Know the decimal and percentage equivalents of the fractions <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{3}{4}</math>, <math>\frac{1}{3}</math>, <math>\frac{2}{3}</math>, tenths and fifths</p>
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Example of addition and subtraction facts for multiples of 100 to 1000:



If I have 700 ml of orange juice and I pour 300ml into a glass how much is left in the jug?

400ml are left!

Well done, that was quick!

Factors of 24

$$1 \times 24$$

$$4 \times 6 \quad 24 \quad 3 \times 8$$

$$2 \times 12$$

so there are 8 factors of 24....  
1,2,3,4,6,8,12,24

**RULE:** A whole number is divisible by 4 if the last two digits are divisible by 4.

Let's try ...

2437 ... no, because 37 isn't divisible by 4  
1748... yes, because 48 is divisible by 4

**RULE:** A whole number is divisible by 6 if it is even and is also divisible by 3

**REMEMBER!**

A whole number is divisible by 3 if the sum of its digits is divisible by 3

Let's try...

8431 ... no because it's odd

5462 ...no because the digits total 17 (5+4+6+2)

7314 ...yes because 7+3+1+4= 15, which is divisible by 3

Building confidence in mathematics is crucial so be pleased with their efforts and always encourage with praise. Make sure these practice sessions are enjoyable - if your child is really not in the mood it is the wrong time to be practising!

## Helpful hints for parents

- List pairs of numbers
- Jot the opposite statements alongside e.g.  $850 + 150$     $150 + 850$
- Practise with the numbers in order and chosen randomly - remember the aim is for the child to be able to respond immediately.

### Key vocabulary

How many more to make...?, altogether, make, sum, total, how much more is...than..., ...difference between  
Divisible by, factor, shared, divided by, groups of

## Make it real!

A packet of popcorn cost 74p. How much change will I have from a pound?

26p!  
Why?  
The difference between 74 and 100 is 26.



Dad measures 350g of sugar from a kilogram bag of sugar to bake a cake. How much sugar is left in the bag?

650g!  
How do you know?  
Because 350 and 650 total 1000.



A farmer has 126 eggs and puts them into boxes of 6. Will there be any eggs left over?

No!  
Are you sure?  
Yes, because it is even and the sum of the digits is in the three times table



A baker cooks a batch of 245 muffins and puts them into packs of 4. Will there be any left on the tray?

Yes!  
Can you explain?  
45 is not divisible by 4, so neither is 245



## Make it fun!

### Call out!

Play number ping pong! Start of saying 'ping', child replies with 'pong'.

Repeat and then convert to numbers i.e. say '73' and they reply '27' (number pairs that total 100) or '550' and they reply '450'.



### What's hidden?

Have a bag of twenty 5p pieces - child can select a random number and quickly call out the change from a pound which is hidden in the bag.

### Cards:

- Make cards with multiples of 50 on them (e.g. 50, 100, 150 etc)
- child can select one at random a quickly calls out how many more are needed to make 1000
- ask children to sort them into pairs that total 1000 - how quickly can they do it? Can they beat their last time?



### Dice:

Roll a dice and generate a two-digit, three-digit or four-digit number. Children discuss whether the number is divisible by 4 or 6.

### Timed Games:

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



# Key Instant Recall Facts



This half term your child is working towards achieving their individual KIRF target, indicated below. The ultimate aim is for your child to be able to recall these facts **instantly!**

Know o'clock on a clock face	Know o'clock and half past	Know o'clock, half past, quarter to and quarter past.	Read the time in intervals of 5 minutes
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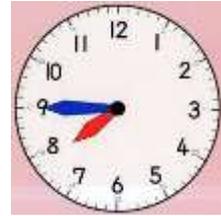


Can you tell the time?



## Key Vocabulary

O'clock  
 Half past  
 Quarter to  
 Quarter past  
 Five past one  
 Twenty five to four



Building confidence in mathematics is crucial so be pleased with their efforts and always encourage with praise. Make sure these practice sessions are enjoyable - if your child is really not in the mood it is the wrong time to be practising!

## Helpful hints for parents

- ask your child to tell the time regularly
- Discuss what time things happen, for example, "The school bus comes at half past 8."
- Talk about the time. "We need to go at quarter to five."

### Key vocabulary

O'clock  
Five past one

Half past

Quarter to  
Twenty five to four

Quarter past

## Make it real!

The cakes need to cook for 15 minutes. What time do they need to come out of the oven??

Quarter past 4.  
It's 4 o'clock now, so in a quarter of an hour it is quarter past 4.



Your TV programme starts at quarter past 5 and lasts for half an hour. What time will it finish?

Quarter to 6.  
How do you know?  
Quarter past 5 and another half an hour is quarter to 6.



*Make an analogue clock face with hands that move or use an old clock or watch to practice.*

## Make it fun!

**Call out!**  
What time is it now?

**Cooking**  
Baking something in the oven and timing it helps develop children's concept of time.

**What time is it, Mr Wolf?:**

What time is it Mr Wolf develops the vocabulary of time.

**Read books about time**





# Key Instant Recall Facts



This half term your child is working towards achieving their individual KIRF target, indicated below. The ultimate aim is for your child to be able to recall these facts **instantly!**

**Know all multiplication and division facts for 3x, 6x and 9x table**

**Know all multiplication and division facts for all tables up to 10 x 10**

**Know the tests for divisibility for 2,3,5,9 and 10**

**Know square numbers to 12 x 12**

**Know the square roots of square numbers to 15 x 15**

If you can cut a cake into 6 slices, how many cakes would you need to buy if there were 18 people coming to the party?



3 cakes!

Well done, that was quick!

$7 \times 3 = 21$	$3 \times 7 = 21$
$21 \div 7 = 3$	$21 \div 3 = 7$

**Remember, when you know 1 fact, you also know 3 more!**

**RULE:** A whole number is divisible by 2 if the last digit is 0, 2, 4 6 or 8.

**RULE:** A whole number is divisible by 3 if the sum of its digits is divisible by 3

Let's try!

7314 ...yes because  $7+3+1+4= 15$ , which is divisible by 3

**RULE:** A whole number is divisible by 5 if the last digit is 0 or 5

**RULE:** A whole number is divisible by 9 if the sum of its digits is divisible by 9

Let's try ...

437 ... no, because  $4 + 3 + 7 = 14$  which isn't divisible by 9

738... yes, because  $7 + 3 + 8 = 18$  which is divisible by 9

**RULE:** A whole number is divisible by 10 if the last digit is 0

Building confidence in mathematics is crucial so be pleased with their efforts and always encourage with praise. Make sure these practice sessions are enjoyable - if your child is really not in the mood it is the wrong time to be practising!

## Helpful hints for parents

- Encourage children to use doubling to link tables such as 2s, 4s, and 8s
- Look for patterns in the tables, for example in the 9 times table the digit sum is always 9!
- Chanting tables really does help. Make it fun by adding actions too or singing!
- Don't forget to chant those division facts too, they are often much harder to recall

**Key vocabulary** times multiplied by lots of groups of multiple of divided by shared product  
divisible by factor square number quotient

## Make it real!

A back yard is 8 metres long and 4 metres wide. What is the total area?

32 metres squared!  
How do you know?  
Because 4 multiplied by 8 is 32.



A recipe for a cake requires three tablespoons of honey. If I make 6 cakes for a school fete, how many tablespoons will I need?



18 tablespoons!  
Why?  
The product of 3 and 6 is 18.

We go on holiday in 7 weeks time. How many days are left until we go? How many school days are left?

49 days and 35 school days!  
Why?  
There are 7 days in a week so 7 times 7 is 49.  
We only go to school for 5 days, so five seven's are 35.



## Make it fun!

### Call out!

Play 'Beat the calculator'. One person works out the answer to a multiplication or division question (similar to those above) with a calculator and one person works them out in their head. Who is the quicker?

### Dice?

Roll a dice and generate a two-digit, three-digit or four-digit number. Children discuss whether the number is divisible by 2, 3, 5, 9 or 10.



### Playing cards:

Remove picture cards from the pack. Pick a card and state the multiplication and division fact that the child is working on.  
eg Pick the '9' card; so  $9 \times 7 = 63$  and  $63$  divided by  $7 = 9$

### Dominoes:

To practice the 8 times table, for example, pick a domino and add the dots. The child multiplies the total by 8. The child should also give the associated division fact.



### Songs and rhymes

There are lots of CDs available with musical tables. Great fun to sing along to on long car journeys!

### Timed Games:

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

**Remember to work out a tricky multiplication use what you already know! So to work out  $6 \times 8$ : "we might know  $6 \times 4 = 24$  and then double it to make 48"**