



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

**Know all decimal number bonds to 1 and 10. ( 1 decimal place).**

All decimal bonds for 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 for 10:

$$\begin{aligned} 6.2 + 3.8 &= 10; 3.8 + 6.2 = 10 \\ &\text{so} \\ 10 - 6.2 &= 3.8; 10 - 3.8 = 6.2 \\ 4.9 + 5.1 &= 10; 5.1 + 4.9 = 10 \\ &\text{so} \\ 10 - 4.9 &= 5.1; 10 - 5.1 = 4.9 \end{aligned}$$

**Call out!**

Play number ping pong!  
Start off saying 'ping',  
child replies with 'pong'.  
Repeat and then convert  
to numbers i.e. say '0.3'  
and they reply '0.7'  
(decimal bonds for 1)

Helpful hints:

- *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*

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!

# Key Instant Recall Facts



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

**Know all multiplication and division facts up to 12 x 12.**

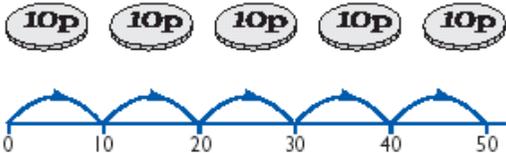
## Helpful hints

- 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*

How many 10 pence pieces make 50 pence?



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?

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

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

## Call out!

Play Fizz Buzz. To practise 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.

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.

Remove picture cards from a pack of cards. 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

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# Key Instant Recall Facts



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

**Know the doubles and halves of all two digit numbers**  
**Identify prime numbers up to 20.**

**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*

**Double**

- 34 → 68
- 35 → 70
- 36 → 72

**What is 1/2 of 38?**

*1/2 of 30 = 15  
 1/2 of 8 = 4*

**So 1/2 of 38 must be 19!**

**Halves**

- 84 → 42
- 85 → 42  $\frac{1}{2}$   
 or 42.5
- 86 → 43

Two tickets cost £67, how much would one ticket cost?  
*£33.50 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. Double 3 is 6 and double 0.7 is 1.4 which makes 7.4 altogether*

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'

**Timed Games:**

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

Prime Numbers Under 20

2	3	5	7
11	13	17	19

**A prime number is a whole number greater than 1 whose only factors are 1 and itself. A factor is a whole numbers that can be divided evenly into another number.**

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# Key Instant Recall Facts



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

Know doubles and halves of all whole numbers to 100, all multiples of 10 to 1000 and all multiples of 100 to 10,000  
Recall metric conversions.



## Length

1 centimetre (cm) = 10 millimetres (mm)

1 metre (m) = 100 centimetres (cm)

1 kilometre (km) = 1000 metres (m)



## Weight

1 gram (g) = 1000 milligrams (mg)

0.1 kilograms (kg) = 100 grams (g)

1 kilogram (kg) = 1000 grams (g)

1 tonne = 1000 kilograms (kg)



## Capacity

1 litre (l) = 1000 millilitres (ml)

1 litre (l) = 100 centilitres (cl)

1 centilitre (cl) = 10 millilitres (ml)

0.1 litres (l) = 100 millilitres (ml)

## **Multiples**

A multiple is a number which can be divided by another number without a remainder.

For example:  $32 \div 4 = 8$     $32 \div 8 = 4$

Multiples of 10:

10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160 etc.

Multiples of 100:

100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200, 1300, 1400, 1500, 1600 etc.

## Doubling (x2)

Example:

Double: 360

$$\begin{array}{r} \swarrow \quad \searrow \\ 600 + 120 = \underline{720} \end{array}$$

## Halving (÷ 2)

Example:

Half: 840

$$\begin{array}{r} \swarrow \quad \searrow \\ 400 + 20 = \underline{420} \end{array}$$

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I know all pairs of factors of numbers up to 100.

I can recall square numbers up to  $12^2$  and their square roots.

**Factors are numbers that you can multiply together to get a greater number. These are best learnt as pairs and, if times table knowledge is strong, should come easily!**

### Factors of 24

$$1 \times 24$$

$$4 \times 6 \quad \boxed{24} \quad 3 \times 8$$

$$2 \times 12$$

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

Play games to make this fun...

### 'Find The Factors!'

"You have 1 minute to find as many pairs of factors of 60 as possible!"

### 'Missing Factors'

"Can you spot the missing factors for 48 in this list?"

$1^2 = 1 \times 1 = 1$	$\sqrt{1} = 1$
$2^2 = 2 \times 2 = 4$	$\sqrt{4} = 2$
$3^2 = 3 \times 3 = 9$	$\sqrt{9} = 3$
$4^2 = 4 \times 4 = 16$	$\sqrt{16} = 4$
$5^2 = 5 \times 5 = 25$	$\sqrt{25} = 5$
$6^2 = 6 \times 6 = 36$	$\sqrt{36} = 6$
$7^2 = 7 \times 7 = 49$	$\sqrt{49} = 7$
$8^2 = 8 \times 8 = 64$	$\sqrt{64} = 8$
$9^2 = 9 \times 9 = 81$	$\sqrt{81} = 9$
$10^2 = 10 \times 10 = 100$	$\sqrt{100} = 10$
$11^2 = 11 \times 11 = 121$	$\sqrt{121} = 11$
$12^2 = 12 \times 12 = 144$	$\sqrt{144} = 12$

What is 8 squared?

What is 7 multiplied by itself?

What is the square root of 144?

Is 81 a square number?

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# Key Instant Recall Facts



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

### Divisible by 2:

Rule: If it ends with a 0, 2, 4, 6, or 8

1 7 **8**

Look at the last digit  
Is it 0, 2, 4, 6, or 8?  
If it is then the number is divisible by 2

### Divisible by 5:

Rule: If it ends with a 5 or a 0

6 5 **5**

Look at the last digit  
If it is a 5 or a 0 the number is divisible by 5

### Divisible by 3:

Rule: If the sum of the digits is a multiple of 3

2 0 7 9

Add the digits  
 $2 + 0 + 7 + 9 = 18$   
18 is a multiple of 3  
So 2079 is divisible by 3

### Divisible by 9:

Rule: If the sum of the digits are a multiple of 9

4 6 9 2 6

Add the digits  
 $4 + 6 + 9 + 2 + 6 = 27$   
27 is a multiple of 9  
So 46926 is divisible by 9

### Divisible by 10:

Rule: If the last digit is 0

3 4 **0**

Look at the last digit  
If it is a 0 the number is divisible by 10

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