

## I know decimal number bonds to 1 and 10.

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:

$0.6 + 0.4 = 1$

$3.7 + 6.3 = 10$

$0.4 + 0.6 = 1$

$6.3 + 3.7 = 10$

$1 - 0.4 = 0.6$

$10 - 6.3 = 3.7$

$1 - 0.6 = 0.4$

$10 - 3.7 = 6.3$

### Key Vocabulary

What do I **add** to 0.8 to make 1?

What is 1 **take away** 0.06?

What is 1.3 **less than** 10?

**How many more** than 9.8 is 10?

What is the **difference** between 0.92 and 10?

$0.75 + 0.25 = 1$

$4.8 + 5.2 = 10$

$0.25 + 0.75 = 1$

$5.2 + 4.8 = 10$

$1 - 0.25 = 0.75$

$10 - 5.2 = 4.8$

$1 - 0.75 = 0.25$

$10 - 4.8 = 5.2$

This list includes some examples of facts that children should know. They should be able to answer questions including missing number questions e.g.  $0.49 + \bigcirc = 10$  or  $7.2 + \bigcirc = 10$ .

### Top Tips

**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 or 100 help you work out the decimal number bonds to 1 or 10?

**Play games** - There are missing number questions at [www.conkermaths.com](http://www.conkermaths.com). See how many questions you can answer in just 90 seconds. There is also a number bond pair game to play.

## I can recall metric conversions.

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

$1 \text{ kilogram} = 1000 \text{ grams}$

$1 \text{ kilometre} = 1000 \text{ metres}$

$1 \text{ metre} = 100 \text{ centimetres}$

$1 \text{ metre} = 1000 \text{ millimetres}$

$1 \text{ centimetre} = 10 \text{ millimetres}$

$1 \text{ litre} = 1000 \text{ millilitres}$

They should also be able to apply these facts to answer questions.

e.g. How many metres in  $1\frac{1}{2}$  km?

### 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. If you would like more ideas, please speak to your child's teacher.

**Look at the prefixes** - Can your child work out the meanings of *kilo-*, *centi-* and *milli-*? What other words begin with these prefixes?

**Be practical** - Do some baking and convert the measurements in the recipe.

**How far?** - Calculate some distances using unusual measurements. How tall is your child in mm? How far away is London in metres?

## I can identify prime numbers up to 20.

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

A prime number is a number with no factors other than itself and one.

The following numbers are prime numbers:

2, 3, 5, 7, 11, 13, 17, 19

A composite number is divisible by a number other than 1 or itself.

The following numbers are composite numbers:

4, 6, 8, 9, 10, 12, 14, 15, 16, 18, 20

### Top Tips

It's really important that your child uses mathematical vocabulary accurately. Choose a number between 2 and 20. How many correct statements can your child make about this number using the vocabulary above?

Make a set of cards for the numbers from 2 to 20. How quickly can your child sort these into prime and composite numbers? How many even prime numbers can they find? How many odd composite numbers?

### Key Vocabulary

prime number

composite number

factor

multiple

Children should be able to explain how they know that a number is composite.

E.g. 15 is composite because it is a multiple of 3 and 5.

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

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

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

### Key Vocabulary

What is 8 squared?

What is 7 multiplied by itself?

What is the square root of 144?

Is 81 a square number?

Children should also be able to recognise whether a number below 150 is a square number or not.

### Top Tips

Cycling Squares – At <http://nrich.maths.org/1151> there is a challenge involving square numbers. Can you complete the challenge and then create your own examples?

Use memory tricks – For those hard-to-remember facts, [www.multiplication.com](http://www.multiplication.com) has some strange picture stories to help children remember.

## I can find factor pairs of a number.

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

Children should now know all multiplication and division facts up to  $12 \times 12$ . When given a number in one of these times tables, they should be able to state a factor pair which multiply to make this number. Below are some examples:

$24 = 4 \times 6$	$42 = 6 \times 7$
$24 = 8 \times 3$	$25 = 5 \times 5$
$56 = 7 \times 8$	$84 = 7 \times 12$
$54 = 9 \times 6$	$15 = 5 \times 3$

### Key Vocabulary

Can you find a **factor** of 28?

Find two numbers whose **product** is 20.

I know that 6 is a factor of 72 because 6 multiplied by 12 equals 72.

### Top Tips

Play games - There is an activity at [www.conkermaths.org](http://www.conkermaths.org) to practise finding factor pairs

Think of the question – One player thinks of a times table question (e.g.  $4 \times 12$ ) and states the answer. The other player has to guess the original question.

Use memory tricks – For those hard-to-remember facts, [www.multiplication.com](http://www.multiplication.com) has some strange picture stories to help children remember.