



# Supporting Your Child with Maths

Year 6

## Booklet 2: February

These booklets have been designed to help you support your child as they build and develop their skills on a **strong foundation** of key mathematical concepts.

The maths curriculum covers a wide range of concepts but is built on **confidence and fluency of key facts**. When a child is fluent with these facts and skills their confidence grows and they are more able to **apply** them to a range of problems.

The booklets include specific guidance for your child's year group on skills and methods used as well as ideas for games to play and ways to practise key ideas.

Wherever we can, we want to make this practice **fun** and **practical**.

Lots of opportunities to **talk** about the maths and to show that we, as adults, **enjoy** it too.

*Did you know?*

- Parents' maths knowledge has **no** impact on how successful their children will be
- Parents' attitude towards maths has a **pro-found** impact on their children's success

*Did you know?*

Mathematical understanding has a bigger impact on success in adulthood than reading and writing

If you have any questions or would like to know more, please contact your child's teacher or Mrs Gibbons, the maths leader.

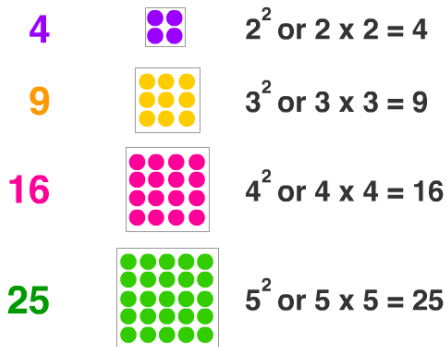


# Learn-Its

## Year 6 – Phase 2 (Nov-Feb)

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

By the end of this phase, 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

The secret to success is practising **little** and **often**. Use time wisely. Can you practise these Learn-Its 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.

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.



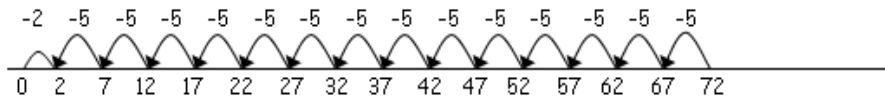
# Practise It

Year 6 – Phase 2 (Nov-Feb)

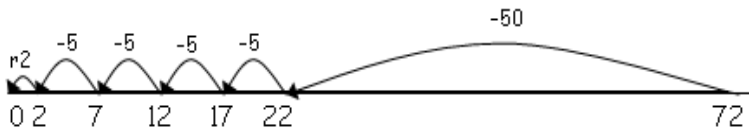
**I can use an informal chunking method to divide by a 2-digit number.**

Chunking is a useful division method based on repeated subtraction. Although at this stage it is recorded as shown below, this technique becomes a useful mental method.

$$72 \div 5$$



Becomes:



Then onto the vertical method:

**1-digit chunking**

$$72 \div 3$$

$$\begin{array}{r}
 3 \overline{) 72} \\
 \underline{- 30} \\
 42 \\
 \underline{- 30} \\
 12 \\
 \underline{- 6} \\
 6 \\
 \underline{- 6} \\
 0
 \end{array}$$

Answer: 24

Annotations: 10x, 10x, 2x, 2x

### Top Tips

As children become more confident this can also be solved by counting up to the target number. This makes it easier to use mentally.

**2-digit chunking**

e.g.  $972 \div 36 =$

$$\begin{array}{r}
 27 \\
 \hline
 36 \overline{) 972} \\
 \underline{- 720} \quad (36 \times 20) \\
 252 \\
 \underline{- 180} \quad (36 \times 5) \\
 72 \\
 \underline{- 72} \quad (36 \times 2) \\
 0
 \end{array}$$

Answer 27

### Top Tips

- Know your times tables
- Remember to find the answer you count the chunks you have taken away
- Make sure your subtracting is accurate



# Try It

Year 6 – Phase 2 (Nov-Feb)

## Try these

How many 250 ml cups of tea can you pour from a tea urn that holds 8.5 litres?

$$50 \div \square = 2.5$$

A packet contains 1.5kg of rabbit food.

Rennie feeds her rabbit 30g of food each day.

For how many days does the packet of food last?

Cream cheese costs £3.60 for 1 kg.

Robbie buys a pot of cream cheese for 90p.

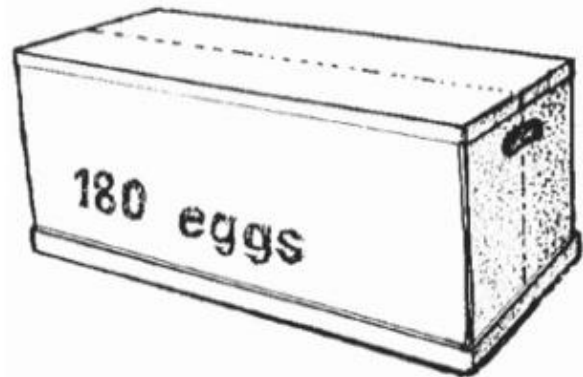


How many grams of cream cheese does he buy?

Eggs are put in **trays of 12**



The trays are packed in boxes.



Each **box** contains **180 eggs**.

How many **trays** are in each **box**?

### Chunking or long Division?

All of these could also be solved using a more formal method but the chunking method can be used mentally with some numbers and so can be more efficient.