KS2 Maths Parent Workshop

February 2023

Aims

- To become familiar with the aims of the national curriculum.
- To understand the importance of fluency and number recall.
- To understand what the Multiplication Table Check is.
- To become familiar with the use of Numbots and Timestables Rockstars.
- To know how to further support your child at home.

Aims of National Curriculum

The national curriculum for mathematics aims to ensure that all pupils:

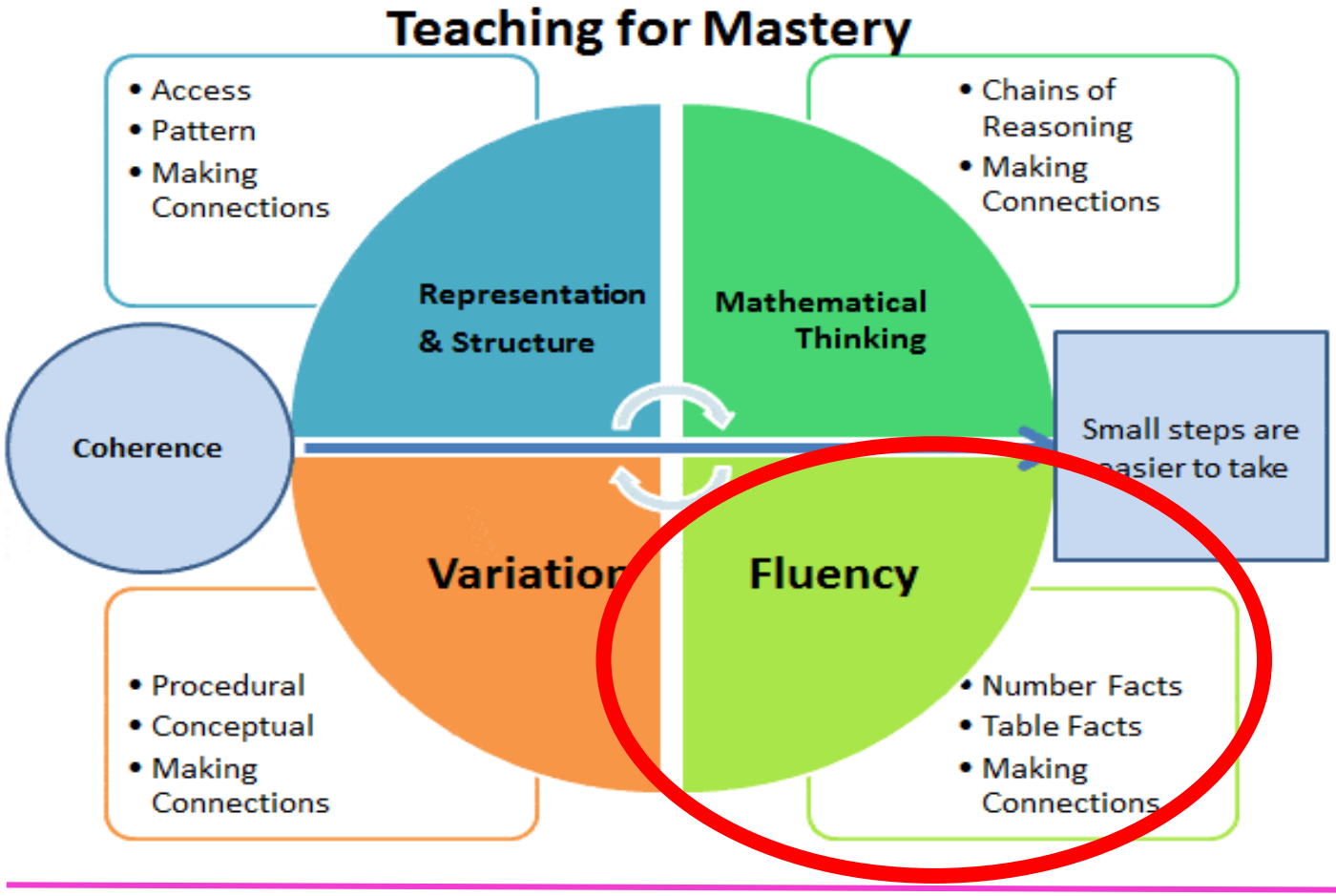
1. Become fluent in the fundamentals of mathematics which includes having a good understanding of numbers in relation to each other, making connections between numbers and being able to manipulate numbers mentally.

2. Reason mathematically by following a line of enquiry, identify relationships and generalisations and developing an argument, justification or proof using mathematical language.

3. Can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Depth and not breadth of understanding.

White Rose Maths - Teaching for Mastery



The Importance of Recall and Fluency

- Children need to be able to rapidly recall facts.
- Automaticity reduces cognitive overload in the working memory and enable them to focus on new concepts.
- Basic number facts are needed for continued learning and progression.
- Knowing these facts helps to build children's confidence.
- Gives them the best chance of success in formal statutory assessments.
- Prepares them for life outside school.

Number Facts children should know by the end of KS1

- Number bonds within 10 (5+2=10)
- Number bonds to 10 (8+2)
- Number bonds to 20 (18+2)
- Number bonds to 100 (80 +20)
- Doubles
- Halves
- 2s,5s and 10 timetables – by the end of Year 2

Aims of National Curriculum

Year 1: Counting in 2s, 5s and 10s

Times table calculations - **10s** and 2s (if you feel they are ready)

Year 2: Counting in 2s, 5s, 10s and 3s

Times table calculations - **2s, 5s, 10s** and 3s (if you feel they are ready)

Year 3: Counting 2s, 3s, 4s, 5s, 8s, 10s,

Times table calculations - **3s, 4s, 8s** as well as 2s, 5s and 10s from KS1

Year 4: Counting 6s, 7s, 9s

Times table calculations - **6s, 7s, 9s, 11s and 12s** as well as 3s, 4s, 8s from Year 3 and 2s, 5s and 10s from KS1

Year 5 and Year 6: recall multiplication and division facts for multiplication tables up to 12 × 12

NumBots

What is NumBots?

NumBots is an online maths game which supports children with their ***understanding, recall and fluency in mental addition and subtraction, so that they move from counting to calculating.***

It focuses on significantly improving your child's recall and understanding of ***number bonds and addition and subtraction facts***. These are critical foundations in maths.

NumBots

Children need to correctly answer the question with speed and accuracy.

In Numbots, if they are incorrect or very slow the level/ question will repeat until the child demonstrates sufficient proficiency.

The purpose of this is to build the children's number fluency skills so that they become automatic and do not need to use their fingers to work the answer out.

What is The MTC?

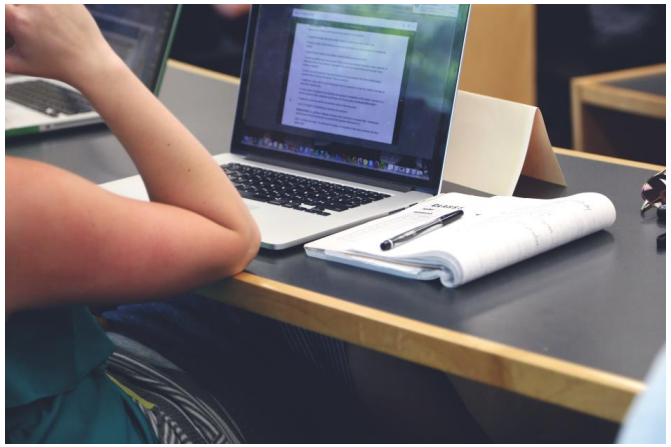
A formal test of multiplication skills takes place in the summer term of Year 4.

The DfE says that the check is part of a new focus on mastering numeracy, giving children the skills and knowledge they need for secondary school and beyond.

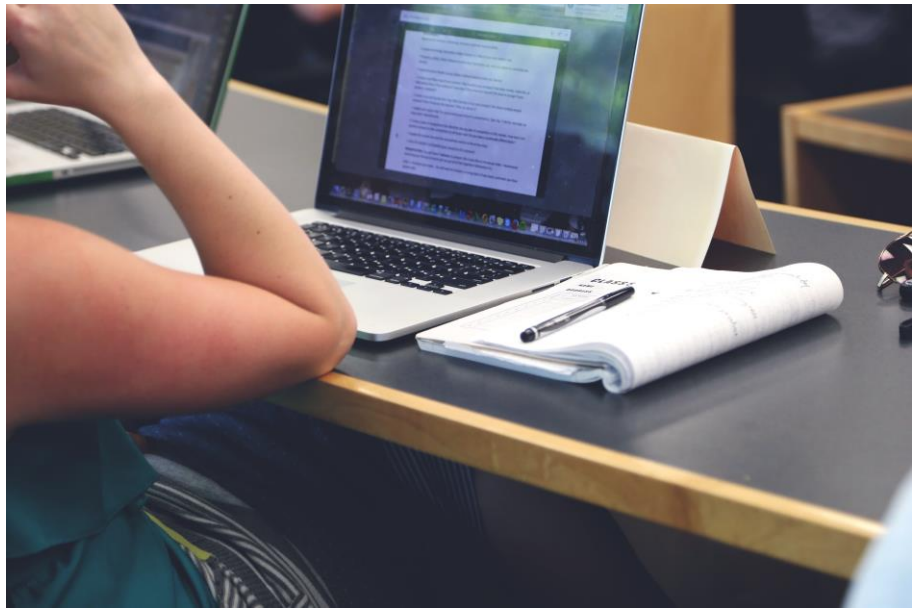
The purpose of the MTC is to determine whether Y4 pupils can recall their multiplication tables fluently (being able to answer times tables questions accurately and quickly, without having to work out the answers).

The Multiplication Tables Check will be administered in the three-week period **starting on Monday 5 June 2023.**

The practicalities



- The check will be fully digital.
- Answers will be entered using a keyboard, by pressing digits using a mouse or using an on-screen number pad.
- Usually, the check will take less than 5 minutes for each child.
- The children will have 6 seconds from the time the question appears to input their answer. *(6 seconds per answer means that children must be able to read, recall and enter their response within that time. Whatever is written in the answer box at the end of 6 seconds will be counted as the answer.)*
- There will be a total of 25 questions with a 3 second pause in-between questions.
- There will be 3 practice questions before the check begins.



The practicalities

- There's no problem solving or division just simple "3 x 4 = ?" type questions

The results are for TEACHERS. **They allow teachers a chance to identify children who need some more help with their times tables to stop them from falling further behind their peers as they move up to Year 5 (and then Year 6).**

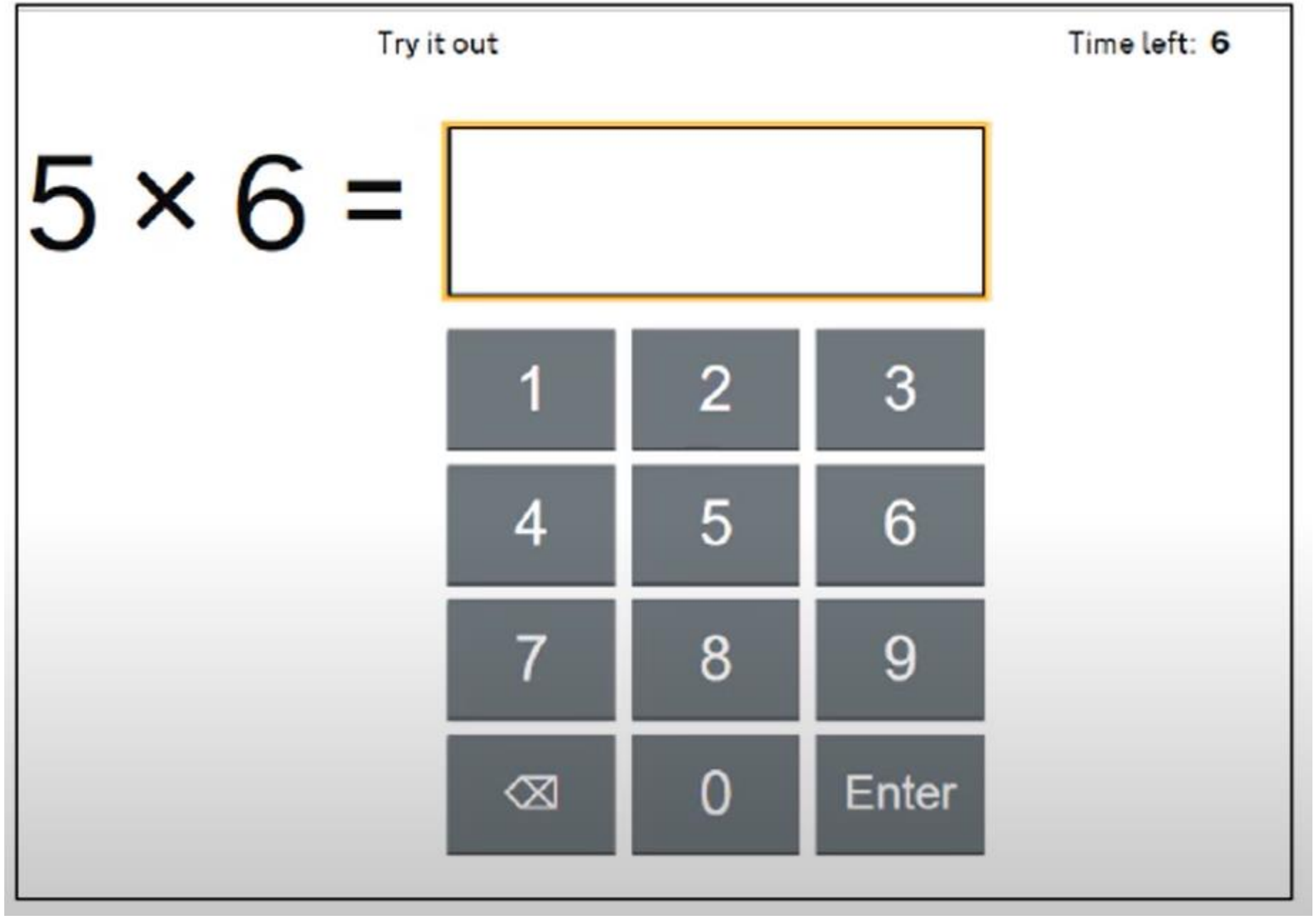
- There is no 'pass' rate or threshold which means that, unlike the Phonics Screening Check, children will not be expected to re-sit the check.

- Results will be shared with parents.

This is what pupils will see when they complete the multiplication tables check.

They will have a timer on the top right hand corner that tells the children how many seconds they have left.

They will not be informed of whether they have got a question incorrect or not and will not be told their score at the end.



Specific arrangements for multiplication tables check

Children with additional needs, who have similar provision in their day-to-day learning at school, may be allotted specific arrangements, including:

- Colour contrast;
- Font size adjustment;
- ‘Next’ button (alternative to 3-second pause);
- Removing on-screen number pad;
- An adult to input answers;
- Question reader;
- Audible time alert.

The Questions

- Each pupil will be **randomly assigned** a set of questions.
- There will be repeated questions across different checks each year, but no more than 30% of questions will be repeated in any two checks.
- Children will **only face multiplication statements** in the check (not related division facts).
- Pupils will not see their individual results when they complete the check.

During the check

- There will always be questions from the 3, 4, 5, 6, 7, 8, 9, 11 and 12 multiplication tables in each check.
- There will be no questions from the 1 times table (i.e 1 x 8 or 8 x 1).
- The 6, 7, 8, 9 and 12 times tables are more likely to be asked.
- There will only be a maximum of 7 questions from the 2, 5 and 10 times tables.
- Reversal of questions will not feature in the same check.

Multiplication table limits

The STA state that they are classifying the multiplication tables by the first number in the question. For example, 8 x 3 would fall within the 8 times table.

5.2.1 Table 1 – Multiplication table limits in the MTC

Multiplication Table	Minimum number of items in each form	Maximum number of items in each form
1	Not applicable	Not applicable
2	0	2
3	1	3
4	1	3
5	1	3
6	2	4
7	2	4
8	2	4
9	2	4
10	0	2
11	1	3
12	2	4

Questions more likely to appear

The following 11 multiplication questions are more likely to be asked:

- 6 x 6, 6 x 7, 6 x 8, 6 x 9, 6 x 12
- 7 x 8, 7 x 9, 7 x 12
- 8 x 9, 8 x 12
- 12 x 12

Before the check

Children can practise before taking the check

- There will be a ‘try it out’ area the children can use to become familiar with the timings and layout of the check.

Timetables Rockstars

Jamming

Our only timer-free game, Jamming gives players the choice over the tables they practise and whether to include multiplication, division or both. It's perfect for building up confidence on the tables of your choice, at your own pace.

Garage

The questions will only come from the times tables the teacher has set for the week. It will include multiplication and division questions. As pupils start to answer questions, TT Rock Stars works out which facts they take longer on and will give them more of these questions to answer.

Studio

The questions in the Studio can be anything from 1×1 up to 12×12. TT Rock Stars calculates the mean response time from their last 10 games in the Studio and translates that time into a Rock Status.

Timetables Rockstars

Gig

Gigs give pupils and their teachers a way to check overall performance each month. It's a good idea for pupils to play a Gig early in their TTRS journey so that you have a **baseline**. Once played, it becomes unavailable until the 1st of the next month.

Soundcheck

When you play Soundcheck, you get 20 questions each with a 5-second time limit. The questions are multiplication only and evenly weighted in terms of difficulty each time you play. This is great practise for the Year 4 timetable check.

Timetables Rockstars

Maths Assessments Across Primary School

KS1 SATs tests- Year 2

-Arithmetic

-Reasoning

Timetables Check- Year 4

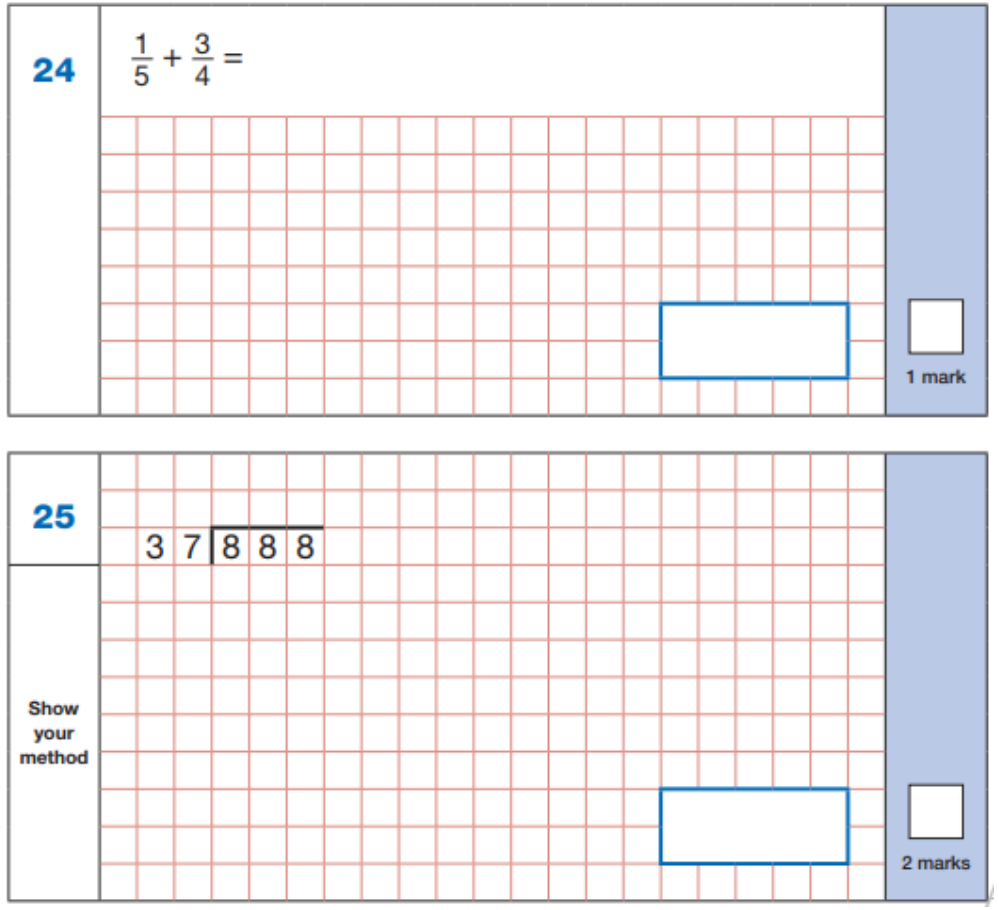
Completed online

KS2 SATs tests- Year 6

-Arithmetic

-Reasoning 1

-Reasoning 2



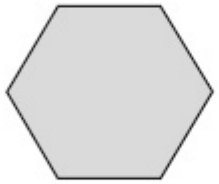
Why is rapid recall of your times tables important?

1. It builds confidence.
2. Reduces cognitive overload.
3. Allows them to access other areas of the maths curriculum.

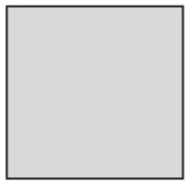
Times tables allows access to other areas of the maths curriculum…

These two shapes have the **same** perimeter.

regular hexagon



square



Not actual size

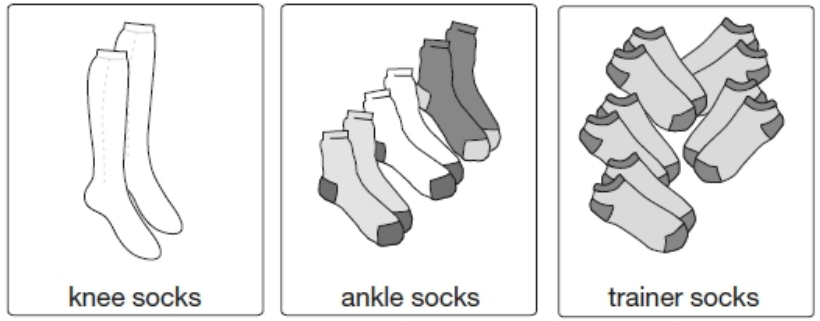
The length of each side of the **hexagon** is **8** centimetres.

Calculate the **area** of the **square**.

Write the two missing values to make these equivalent fractions correct.

$$\frac{\square}{3} = \frac{8}{12} = \frac{4}{\square}$$

A shop sells pairs of socks.



1 pair for £5.45

3 pairs for £7.50

5 pairs for £8. 50

Kirsty buys 1 pair of knee socks and 3 pairs of ankle socks.

She pays with a £20 note.

Children need to know their times tables to answer all of these questions.

Other ways you can help your child at home

White Rose Maths – 1 Minute Maths app

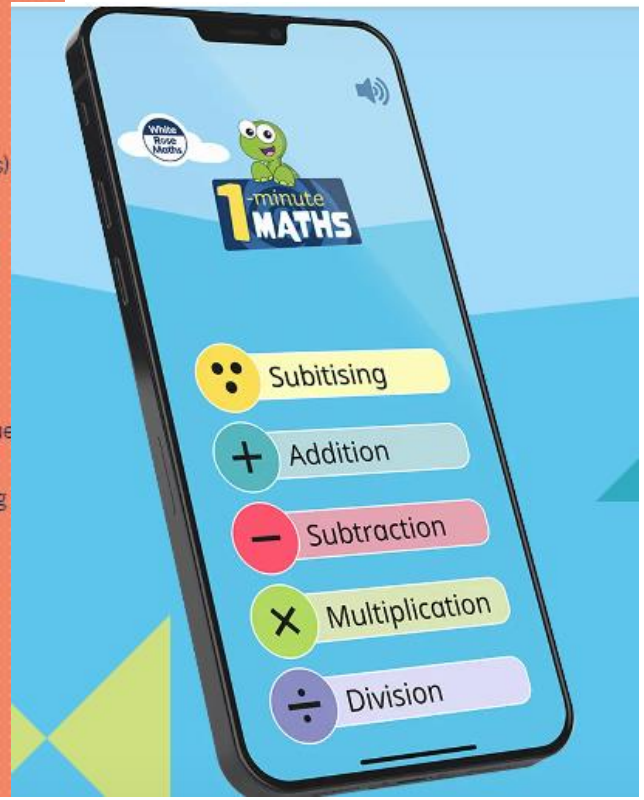
What's the app about?

This first version of the app is aimed at Key Stage 1 pupils (ie, age 5-6 years). Individual one-minute tasks focus on adding and subtracting — and on 'Subitising', the skill of instantly recognising the number of items in a group without counting. Multiplication and division topics are also now available!

How do we use it?

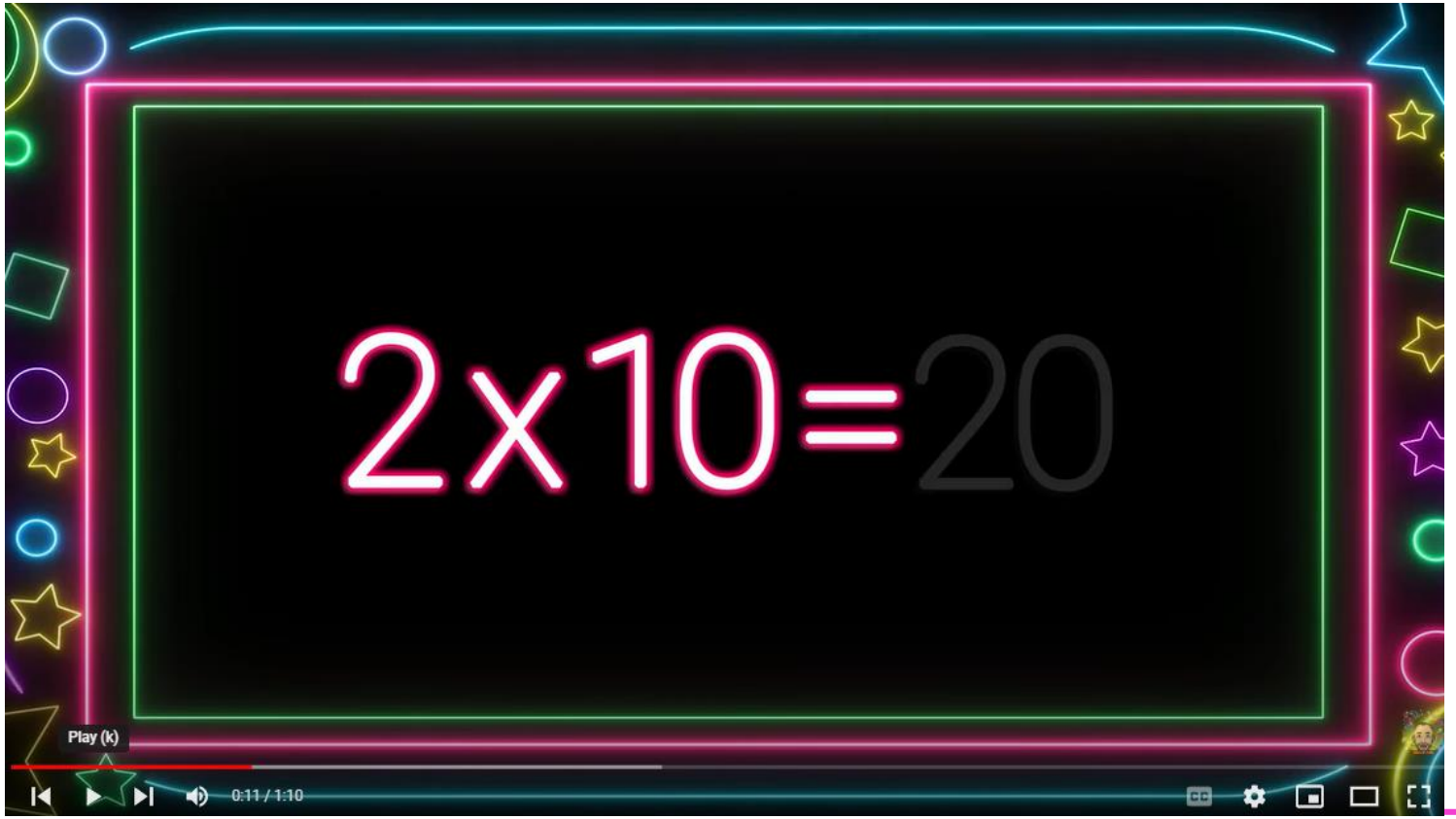
Your child can choose any topic they want to try. They then answer a unique series of questions (so it's a different set of questions every time). If they're struggling with a question, a 'Hint' button will give a helpful clue by showing the question in a different but familiar way.

When the one minute's up, they'll see a feedback screen telling them how they've done.



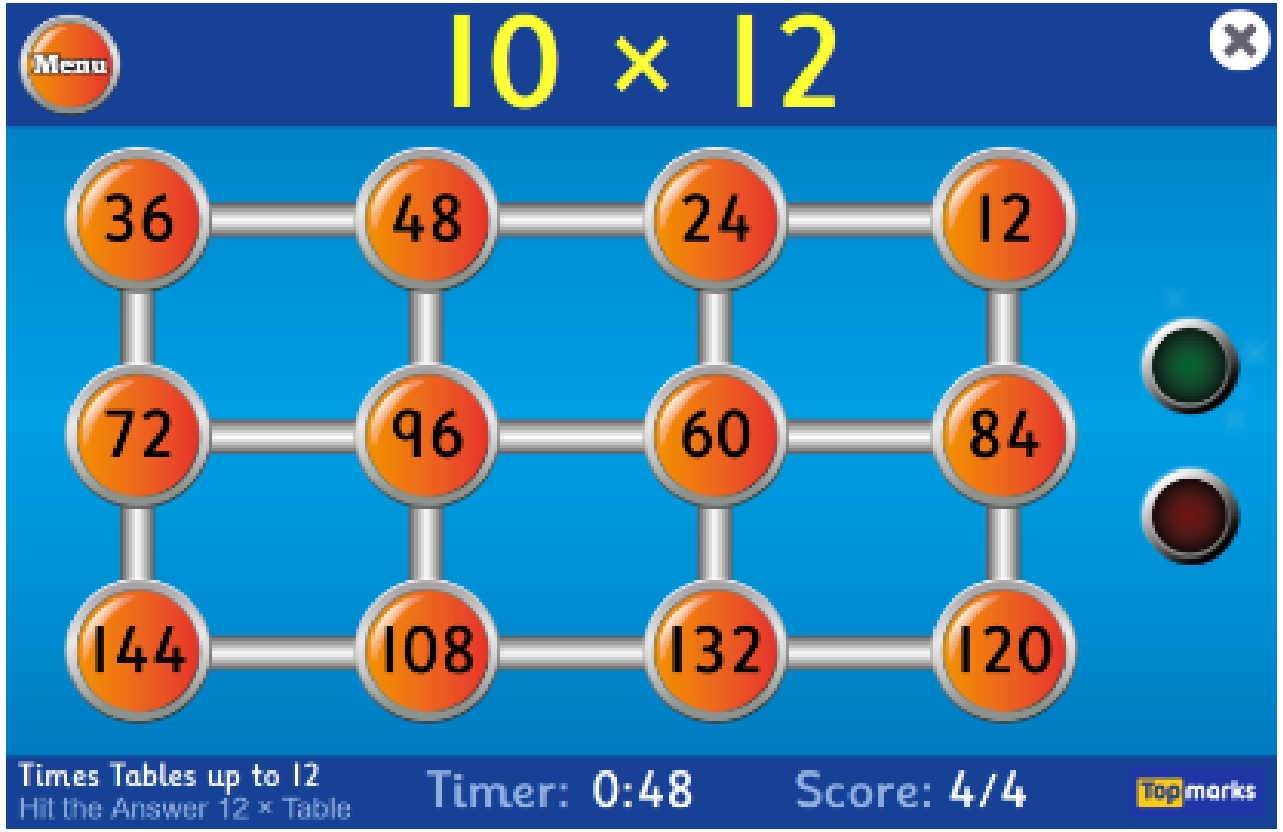
Times Table Songs

https://www.youtube.com/watch?v=S5mJyBnJNas&list=PLU00esrkogUlR9VQzGPf_RT4CUTCP9OO9



Hit the Button

https://www.topmarks.co.uk/maths-games/hit-the-button



Any Questions?