## Multiplication Tables Check

 (MTC)
## What is the MTC?

Since 2019/20 academic year onwards, all state-funded maintained schools and academies (including free schools) in England are required to administer the online MTC to year 4 pupils.
The purpose of the MTC is to determine whether pupils can recall their times tables fluently, which is essential for future success in mathematics. It will help schools to identify pupils who have not yet mastered their times tables, so that additional support can be provided.

More parent information can be found on the Department of education website.
https://assets.publishing.service.gov.uk/media/6543c1ef9e05fd0014be7c64/2024_Information_for_parents_ Multiplication_tables_check_PDFA_v1.1.pdf

## MTC Journey at St Cuthbert Mayne

In 2019 between the 10 th Jtme-28th June childrentookpait in the MTC pilot.
In 2021 the school took part in a second trial after the pandemic.
In June 2022/3 Year 4 children took the MTC and results were reported to the Department of Education and parents/guardians.

## Key Information

Statutory timed test for Year 4
Digital assessment - computers or tablets
25 questions, 6 seconds per question
Up to x12 $\qquad$ x $\qquad$ $=$ $\qquad$
(no division, missing number questions)
Schools will have a 2-week check window, starting on Monday 3 June until Friday 14 June 24 to administer the test
Access arrangements can be made for individual children

## Use of data

## There is no official pass mark.

It includes statistics for pupils in schools in England:
at national level, broken down by the following pupil characteristics: gender, disadvantage, free school meal eligibility, ethnicity, special educational need status, first language and month of birth;
at national level, broken down by the following school characteristics: school type, school phase and school religious character;
at regional and local authority level, broken down by gender.

## How SCM uses data

See which children need further support in Year 5.
We aim for a score of $20+$

## Try it out area

Prior to the mandatory check window, schools will be able to provide ispetheir pupils with access to a 'try it out area' to familiarise [s-pepthemselves with the system. This will be available from the 8th April 24.
Schools and pupils can also use the 'try it out area' to apply any ispep necessary accessibility features for pupil
 work for them.

| x | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 2 | 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 |
| 3 | 0 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | 33 | 36 |
| 4 | 0 | 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 | 36 | 40 | 44 | 48 |
| 5 | 0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 6 | 0 | 6 | 12 | 18 | 24 | 30 | 36 | 42 | 48 | 54 | 60 | 66 | 72 |
| 7 | 0 | 7 | 14 | 21 | 28 | 35 | 42 | 49 | 56 | 63 | 70 | 77 | 84 |
| 8 | 0 | 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 | 80 | 88 | 96 |
| 9 | 0 | 9 | 18 | 27 | 36 | 45 | 54 | 63 | 72 | 81 | 90 | 99 | 108 |
| 10 | 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 |
| 11 | 0 | 11 | 22 | 33 | 44 | 55 | 66 | 77 | 88 | 99 | 110 | 121 | 132 |
| 12 | 0 | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 |

169 facts.

## Major milestones

## Year 1:

- count in multiples of twos, fives and tens
- solve simple multiplication and division using objects, pictures and arrays with support

Year 2:

- count in steps of 2, 3, 5 and 10
- recall and use multiplication and division facts for the 2,5 and 10 multiplication tables

Year 3:

- count from 0 in multiples of 4,8,50 and 100
- recall and use multiplication and division facts for the 3,4 and 8 multiplication tables

Year 4:

- count in multiples of 6, 7, 9, 25 and 1000
- recall multiplication and division facts for multiplication tables up to $12 \times 12$


## Commutativity

| x | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 2 |  |  | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 |
| 3 |  |  |  | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | 33 | 36 |
| 4 |  |  |  |  | 16 | 20 | 24 | 28 | 32 | 36 | 40 | 44 | 48 |
| 5 |  |  |  |  |  | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 6 |  |  |  |  |  |  | 36 | 42 | 48 | 54 | 60 | 66 | 72 |
| 7 |  |  |  |  |  |  |  | 49 | 56 | 63 | 70 | 77 | 84 |
| 8 |  |  |  |  |  |  |  |  | 64 | 72 | 80 | 88 | 96 |
| 9 |  |  |  |  |  |  |  |  |  | 81 | 90 | 99 | 108 |
| 10 |  |  |  |  |  |  |  |  |  |  | 100 | 110 | 120 |
| 11 |  |  |  |  |  |  |  |  |  |  |  | 121 | 132 |
| 12 |  |  |  |  |  |  |  |  |  |  |  |  | 144 |

91 facts


Zero facts

| x | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 2 |  |  | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 |
| 3 |  |  |  | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | 33 | 36 |
| 4 |  |  |  |  | 16 | 20 | 24 | 28 | 32 | 36 | 40 | 44 | 48 |
| 5 |  |  |  |  |  | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 6 |  |  |  |  |  |  | 36 | 42 | 48 | 54 | 60 | 66 | 72 |
| 7 |  |  |  |  |  |  |  | 49 | 56 | 63 | 70 | 77 | 84 |
| 8 |  |  |  |  |  |  |  |  | 64 | 72 | 80 | 88 | 96 |
| 9 |  |  |  |  |  |  |  |  |  | 81 | 90 | 99 | 108 |
| 10 |  |  |  |  |  |  |  |  |  |  | 100 | 110 | 120 |
| 11 |  |  |  |  |  |  |  |  |  |  |  | 121 | 132 |
| 12 |  |  |  |  |  |  |  |  |  |  |  |  | 144 |

## 78 facts

X 1 facts

| x | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2 |  |  | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 |
| 3 |  |  |  | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | 33 | 36 |
| 4 |  |  |  |  | 16 | 20 | 24 | 28 | 32 | 36 | 40 | 44 | 48 |
| 5 |  |  |  |  |  | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 6 |  |  |  |  |  |  | 36 | 42 | 48 | 54 | 60 | 66 | 72 |
| 7 |  |  |  |  |  |  |  | 49 | 56 | 63 | 70 | 77 | 84 |
| 8 |  |  |  |  |  |  |  |  | 64 | 72 | 80 | 88 | 96 |
| 9 |  |  |  |  |  |  |  |  |  | 81 | 90 | 99 | 108 |
| 10 |  |  |  |  |  |  |  |  |  |  | 100 | 110 | 120 |
| 11 |  |  |  |  |  |  |  |  |  |  |  | 121 | 132 |
| 12 |  |  |  |  |  |  |  |  |  |  |  |  | 144 |

66 facts

## X 2 facts (doubling)

| x | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3 |  |  |  | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | 33 | 36 |
| 4 |  |  |  |  | 16 | 20 | 24 | 28 | 32 | 36 | 40 | 44 | 48 |
| 5 |  |  |  |  | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |  |
| 6 |  |  |  |  |  | 36 | 42 | 48 | 54 | 60 | 66 | 72 |  |
| 7 |  |  |  |  |  |  |  | 49 | 56 | 63 | 70 | 77 | 84 |
| 8 |  |  |  |  |  |  |  |  | 64 | 72 | 80 | 88 | 96 |
| 9 |  |  |  |  |  |  |  |  | 81 | 90 | 99 | 108 |  |
| 10 |  |  |  |  |  |  |  |  |  |  | 100 | 110 | 120 |
| 11 |  |  |  |  |  |  |  |  |  |  | 121 | 132 |  |
| 12 |  |  |  |  |  |  |  |  |  |  |  |  | 144 |

## 55 facts

## X 10 facts

| x | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3 |  |  |  | 9 | 12 | 15 | 18 | 21 | 24 | 27 |  | 33 | 36 |
| 4 |  |  |  |  | 16 | 20 | 24 | 28 | 32 | 36 |  | 44 | 48 |
| 5 |  |  |  |  |  | 25 | 30 | 35 | 40 | 45 |  | 55 | 60 |
| 6 |  |  |  |  |  |  | 36 | 42 | 48 | 54 |  | 66 | 72 |
| 7 |  |  |  |  |  |  |  | 49 | 56 | 63 |  | 77 | 84 |
| 8 |  |  |  |  |  |  |  |  | 64 | 72 |  | 88 | 96 |
| 9 |  |  |  |  |  |  |  |  |  | 81 |  | 99 | 108 |
| 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 11 |  |  |  |  |  |  |  |  |  |  |  | 121 | 132 |
| 12 |  |  |  |  |  |  |  |  |  |  |  |  | 144 |

## 45 facts

## Target zone - 45 facts

| $12 \times 3=36$ | $12 \times 4=48$ | $12 \times 5=60$ | $12 \times 6=72$ | $12 \times 7=84$ | $12 \times 8=96$ | $12 \times 9=108$ | $12 \times 11=132$ | $12 \times 12=144$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $11 \times 3=33$ | $11 \times 4=44$ | $11 \times 5=55$ | $11 \times 6=66$ | $11 \times 7=77$ | $11 \times 8=88$ | $11 \times 9=99$ | $11 \times 11=121$ |  |
| $9 \times 3=27$ | $9 \times 4=36$ | $9 \times 5=45$ | $9 \times 6=54$ | $9 \times 7=63$ | $9 \times 8=72$ | $9 \times 9=81$ |  |  |
| $8 \times 3=24$ | $8 \times 4=32$ | $8 \times 5=40$ | $8 \times 6=48$ | $8 \times 7=56$ | $8 \times 8=64$ |  |  |  |
| $7 \times 3=21$ | $7 \times 4=28$ | $7 \times 5=35$ | $7 \times 6=42$ | $7 \times 7=49$ |  |  |  |  |
| $6 \times 3=18$ | $6 \times 4=24$ | $6 \times 5=30$ | $6 \times 6=36$ |  |  |  |  |  |
| $5 \times 3=15$ | $5 \times 4=20$ | $5 \times 5=25$ |  |  |  |  |  |  |
| $4 \times 3=12$ | $4 \times 4=16$ |  |  |  |  |  |  |  |
| $3 \times 3=9$ |  |  |  |  |  |  |  |  |


https://mathsframe.co.uk/en/resources/resource/477

How many dots? Count in groups of 6

## Repeated addition



$$
\begin{aligned}
& 4 \times 6=24 \\
& 6 \times 4=24
\end{aligned}
$$

What does the 4 represent?
What does the 6 represent?
What does the 24 represent?

https://mathsframe.co.uk/en/resource s/resource/477

## How to use the multiplication checker

Change the difficulty - number of questions, time between questions and times tables View results and support learning times table your child is finding tricky Practise daily for 5-10 minutes

## !: <br> 

There are four groups of six; there are twenty four altogether. There are six, four times; there are twenty four altogether. Four is a factor. Three is a factor. The product of four and six is twenty four. Twenty four is the product of four and six.


## Learning the facts



- Start with 1 x $\qquad$
- Make the array
- Clarify $0 \times \ldots=0$
- Write the list
- Check it
- Create the cards
- Play with the cards


## Counting stick - 3LS16

$$
0,4,8,12,16, \text { (hic!), 12, 16, 20, 24, (hic!), 20, 24, 28, 32, (hic!), 28 } \ldots
$$

```
Spot the swap
    stick
```

Circle the two numbers which have swapped.


What are the factors and product?
Missing numbers


What number is hidden?
What are the factors?
What is the product?
What are the number sentences for
?

How would you work this out?
What do you know already?

| $6 \times 6$ | 36 |
| :--- | :--- |
| $7 \times 6$ |  |
| $8 \times 6$ | 48 |

Can you think of 2 ways to find [spepthe answer?

## $6 \times 6+6=42$

$8 \times 6-6=42$

What patterns spean
you notice in sleithe six times spitable?

## 6 times table

$1 \times 6=6$
$2 \times 6=12$
$3 \times 6=18$
$4 \times 6=24$
$5 \times 6=30$
$6 \times 6=36$
$7 \times 6=42$
$8 \times 6=48$
$9 \times 6=54$
$10 \times 6=60$
$11 \times 6=66$
$12 \times 6=72$
Timestables.co.uk

1. The products are even
2. The products increase by six each time
3. The products are all part of the three times tables
4. If you add each digit of the products the answer is

## Patterns in the tables



Pros
Cons

| $0 \times 3=0$ | $0 \times 6=0$ |
| :--- | :--- |
| $1 \times 3=3$ | $1 \times 6=6$ |
| $2 \times 3=6$ | $2 \times 6=12$ |
| $3 \times 3=9$ | $3 \times 6=18$ |
| $4 \times 3=12$ | $4 \times 6=24$ |
| $5 \times 3=15$ | $5 \times 6=30$ |
| $6 \times 3=18$ | $6 \times 6=36$ |
| $7 \times 3=21$ | $7 \times 6=42$ |
| $8 \times 3=24$ | $8 \times 6=48$ |
| $9 \times 3=27$ | $9 \times 6=54$ |
| $10 \times 3=30$ | $10 \times 6=60$ |
| $11 \times 3=33$ | $11 \times 6=66$ |
| $12 \times 3=36$ | $12 \times 6=72$ |

What is the ispesame?
What is isedifferent?

Seven times table hack


## Nifty nines



Doubling and halving ( $x 2, x 4, x 8$ ) ( $x 3$ to $x 6$ )
Commutativity ( $5 \times 8=8 \times 5$ )
Near 2s, 5 s and 10s - WIK (What I Know)
Songs/rhymes/chants
(Percy Parker)
https://ttrockstars.com/


February - 10 minutes a week in the Garage. If they're on Auto, ssepthey should aim to have passed level 308 by the end of the month. "isplililocusing on the 7 s and 8 s .
March - 15 minutes a week in Garage. If they're on Auto, they [ispishould aim to have passed level 365 by the end of the month. [sper Focusing on the 9s.
April - 15 games a week in Garage. If they're on Auto, they should icpepaim to have passed level 420 by the end of the month. Focusing on ispepthe 11s and 12s.
May - 10 minutes a week in Studio and 5 minutes a week in sfepoundcheck, which is our simulator for the MTC.
June - 3 games per day in Soundcheck.

## In school we are

Practising times tables daily - on devices and paper versions
Organising times table interventions from assessment data
Teaching times tables lessons
Keeping times tables high profile in the classroom
Using resources to teach times tables - bead strings, unifix cubes, games
Setting times table homework

At home you can help by
Practising times tables daily - 5-10 minutes everyday will have a huge impact
Help practise a times table your child is confident at along with a times table they are learning.
Use the multiplication checker to build confidence and fluency.
Use formal and informal ways to practise

https://mathsframe.co.uk/en/resources/resource/477

