

# KS2 Maths Parent workshop

Thursday 16<sup>th</sup> January 2025



# Brief overview:

- Long term plan for Maths
- CPA approach and resources
- Parents' booklets and modelling of key methods
- Useful websites
- Q&A

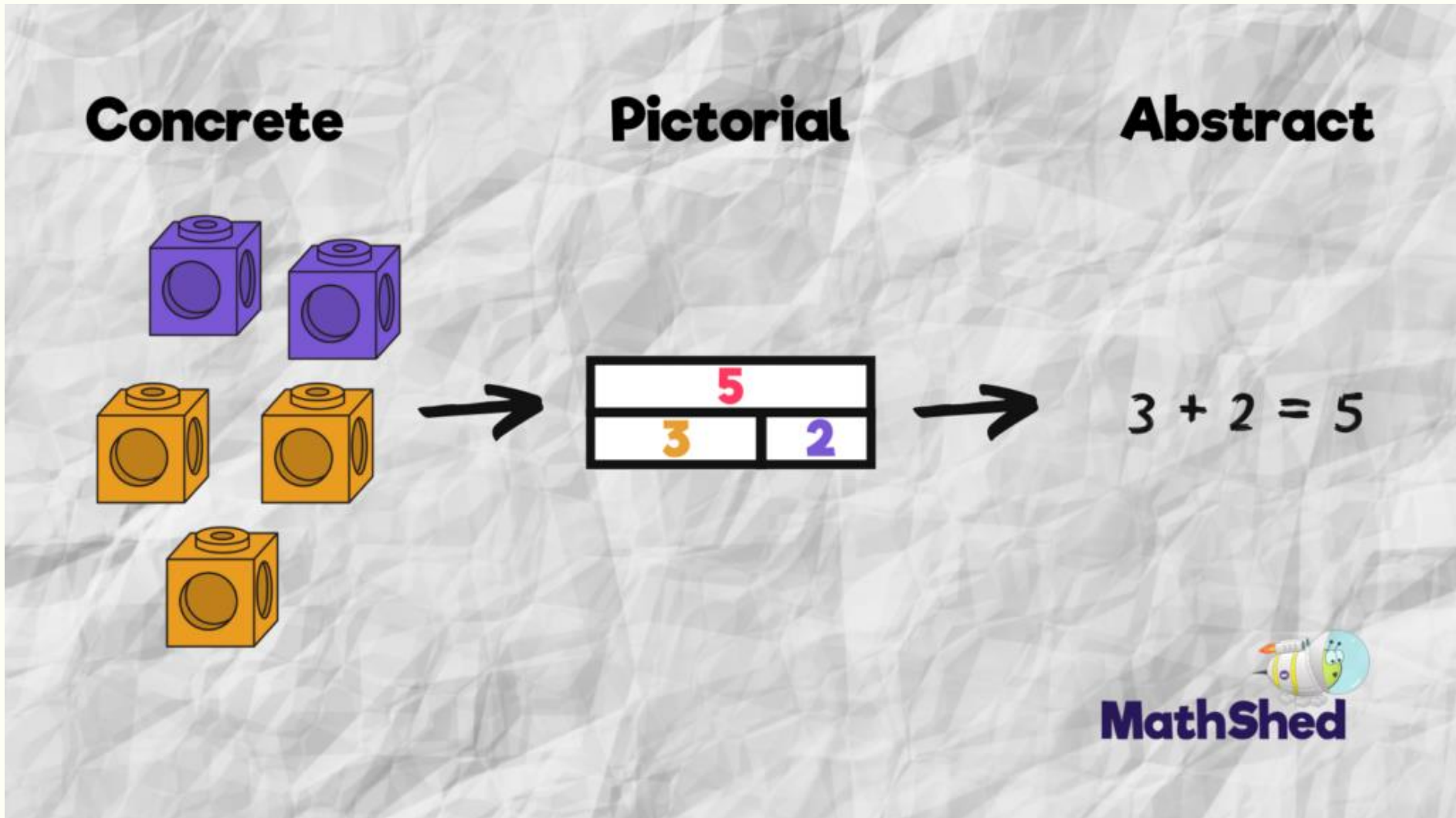
# Year 3/4 Maths overview

<p>Number</p> <hr/> <p><b>Place value</b></p> <p><a href="#">VIEW</a></p>	<p>Number</p> <hr/> <p><b>Addition and subtraction</b></p> <p><a href="#">VIEW</a></p>	<p>Number</p> <hr/> <p><b>Multiplication and division A</b></p> <p><a href="#">VIEW</a></p>	<p>Measurement</p> <hr/> <p><b>Area</b></p> <p><a href="#">VIEW</a></p>		
<p>Number</p> <hr/> <p><b>Multiplication and division B</b></p> <p><a href="#">VIEW</a></p>	<p>Measurement</p> <hr/> <p><b>Length and perimeter</b></p> <p><a href="#">VIEW</a></p>	<p>Number</p> <hr/> <p><b>Fractions A</b></p> <p><a href="#">VIEW</a></p>	<p>Measurement</p> <hr/> <p><b>Mass and capacity</b></p> <p><a href="#">VIEW</a></p>	<p>Number</p> <hr/> <p><b>Fractions B</b></p> <p><a href="#">VIEW</a></p>	
<p>Measurement</p> <hr/> <p><b>Time</b></p>	<p>Number</p> <hr/> <p><b>Decimals</b></p>	<p>Measurement</p> <hr/> <p><b>Money</b></p>	<p>Geometry</p> <hr/> <p><b>Shape</b></p>	<p>Geometry</p> <hr/> <p><b>Position and ...</b></p>	<p><b>Statistics</b></p>

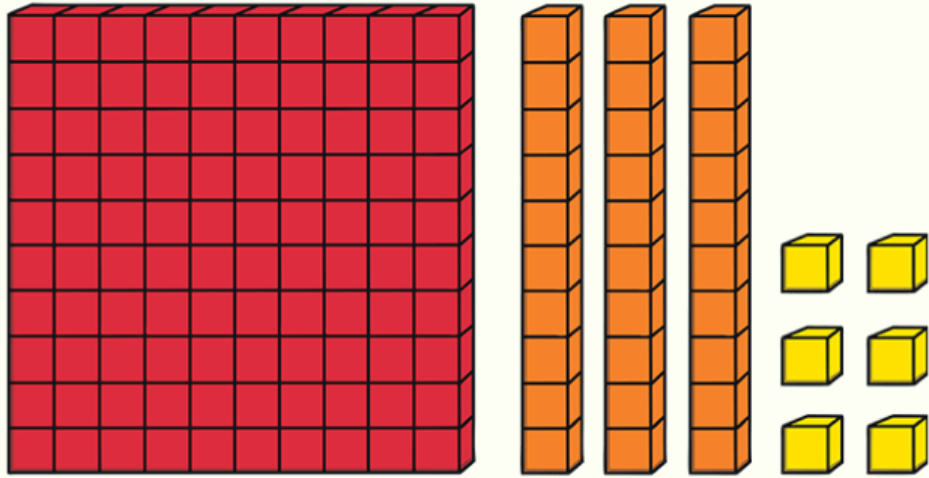
# Year 5/6 Maths overview

<p>Number</p> <hr/> <p><b>Place value</b></p> <p><a href="#">VIEW</a></p> <p><i>Free trial</i></p>	<p>Number</p> <hr/> <p><b>Addition and ...</b></p> <p><a href="#">VIEW</a></p>	<p>Number</p> <hr/> <p><b>Multiplication and division A</b></p> <p><a href="#">VIEW</a></p>	<p>Number</p> <hr/> <p><b>Fractions A</b></p> <p><a href="#">VIEW</a></p>	<p>Number</p> <hr/> <p><b>Multiplication and division B</b></p> <p><a href="#">VIEW</a></p>	
<p>Number</p> <hr/> <p><b>Multiplication...</b></p> <p><a href="#">VIEW</a></p>	<p>Number</p> <hr/> <p><b>Fractions B</b></p> <p><a href="#">VIEW</a></p>	<p>Number</p> <hr/> <p><b>Decimals A</b></p> <p><a href="#">VIEW</a></p>	<p>Measurement</p> <hr/> <p><b>Area, perimeter and volume</b></p> <p><a href="#">VIEW</a></p>	<p>Number</p> <hr/> <p><b>Decimals B</b></p> <p><a href="#">VIEW</a></p>	<p>Number</p> <hr/> <p><b>Fractions, decimals and percentages</b></p> <p><a href="#">VIEW</a></p>
<p><b>Ratio</b></p>	<p><b>Algebra</b></p>	<p>Geometry</p> <hr/> <p><b>Shape</b></p>	<p>Geometry</p> <hr/> <p><b>Position and direction</b></p>	<p><b>Statistics</b></p>	<p>Measurement</p> <hr/> <p><b>Converting units</b></p>

# The CPA approach

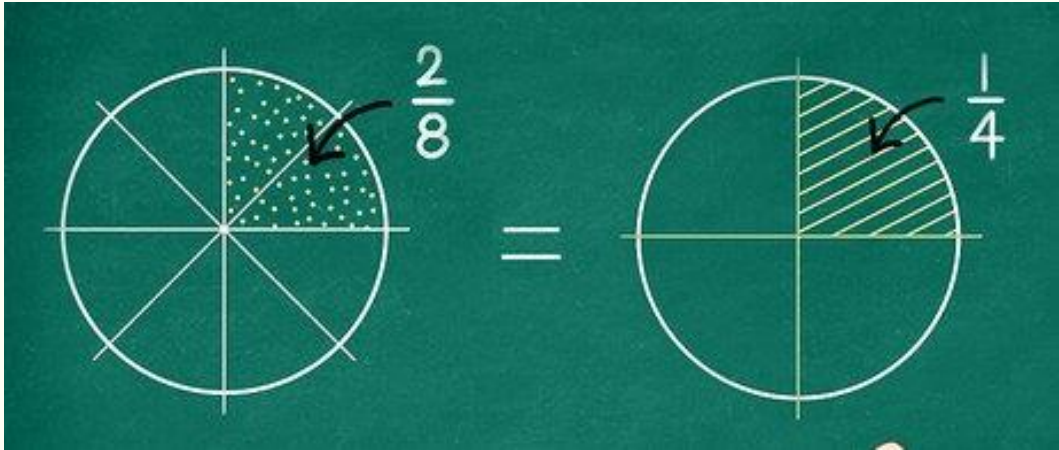
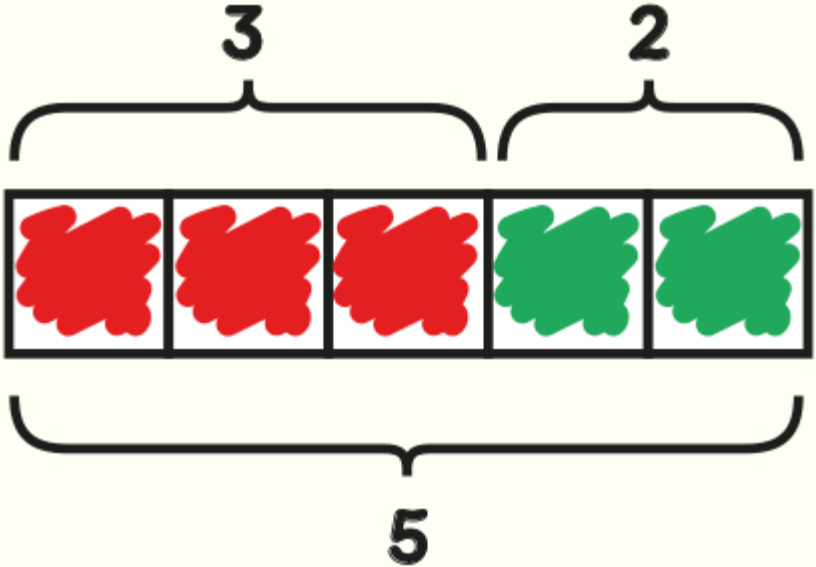
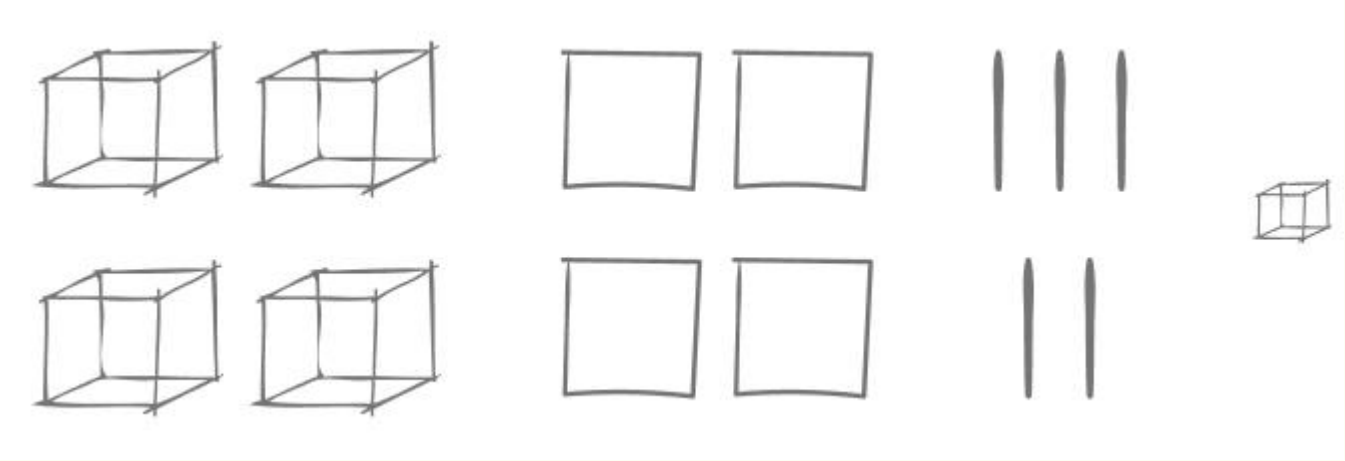


# Concrete resources





# Pictorial



# Abstract

	1	4
+	2	3
	3	7

$$\frac{5}{3} + \frac{2}{3} = \frac{7}{3}$$



# Parents' booklet

Please see the booklet for your child/children's year group(s).

These can also be found on the school website on the individual class pages in the 'Files to download' section.

## Files to Download

[Year 6 Calculation.docx](#)

[Year 5 Calculation.docx](#)



# Column addition

Written method of column addition should be used in a variety of contexts and with numbers of increasing size and complexity.

This should include addition several numbers with different numbers of decimal places (including in the context of measures and money).

Tenths, hundredths and thousandths should be correctly aligned, with the decimal place lined up vertically, including in the answer row.

Zeros should be added into empty decimals places to show there is no value to add.



	2	3	.	3	6	1
+		9	.	0	8	0
	5	2	.	3	0	0
	8	4	.	7	4	1

Adding several numbers with more than four-digits.



			8	2	6	3	1
+				3	4	2	5
	2	1	3	6	2	5	
	2	9	9	6	8	1	

# Column subtraction

## Written Methods:

**Step 1:** Using the compact column method to subtract more complex numbers.



$$\begin{array}{r} \phantom{0} \phantom{1} \phantom{2} \\ \cancel{2} \phantom{6} \phantom{8} \phantom{2} \phantom{1} \\ - \phantom{3} \phantom{9} \phantom{1} \phantom{5} \phantom{1} \\ \hline 8 \phantom{7} \phantom{1} \phantom{7} \phantom{0} \end{array}$$

**Step 2:** Use the compact column method to subtract money and measures, including decimals with different numbers of decimal places. Children can fill empty decimal places with zeros to show the place value in each column.



$$\begin{array}{r} \phantom{0} \phantom{9} \phantom{3} \\ \cancel{10} \phantom{5} \phantom{4} \phantom{1} \phantom{9} \\ - \phantom{3} \phantom{7} \phantom{0} \phantom{8} \phantom{0} \\ \hline 6 \phantom{8} \phantom{3} \phantom{3} \phantom{9} \end{array}$$

Ensure children have experience of using this method for subtraction where there is a 0 in the column they need to exchange from, and that they understand, through clear modelling (using practical resources) how to move to the next column and exchange then 'move' the value along.



$$\begin{array}{r} \phantom{2} \phantom{1} \phantom{5} \phantom{9} \\ \cancel{2} \phantom{2} \phantom{7} \phantom{6} \phantom{0} \phantom{0} \\ - \phantom{1} \phantom{4} \phantom{8} \phantom{5} \phantom{3} \phantom{2} \\ \hline 1 \phantom{7} \phantom{9} \phantom{0} \phantom{6} \phantom{8} \end{array}$$





# Short and long division

**Step 1:** Extend use of short division for dividing by one-digit numbers.

Children continue to develop their use of short division and how to express remainders as whole numbers, fractions, rounded numbers and decimals. Specific teaching to take place to support children in understanding each of these and when they should be



$$\begin{array}{r} 0815 \text{ r } 1 \\ 8 \overline{)65241} \\ \hline 815 \frac{1}{8} \end{array}$$
$$\begin{array}{r} 0815.125 \\ 8 \overline{)65241.0200} \end{array}$$

**Step 2:** Dividing by two-digit numbers

**Long Division - 'Chunking Method'**

Supported by their secure understanding of the division learning done previously, children should be introduced to long division by chunking.

Children should be taught how to set this out clearly, including noting down multiples of the number to support this process. They should be encouraged to take away the largest 'chunk' they can each time to limit the number of steps and therefore likely errors. Children should aim to get to the answer in a maximum of 3 steps.



$$\begin{array}{r} 147 \text{ r } 23 \\ 67 \overline{)9872} \\ \underline{6700} \quad (\times 100) \\ 2802 \\ \underline{2680} \quad (\times 40) \\ 4892 \\ \underline{469} \quad (\times 7) \\ 023 \end{array}$$

# Key skills

- Quick mental addition and subtraction
- Quick mental multiplication and division
- Times tables
- Doubling and halving
- Number bonds to 10/20/100

**These are fundamental skills needed across the entire maths curriculum.**



# TT Rockstars

<https://ttrockstars.com/>



## Garage

- Personalised questions
- Good for practising the timestables that they are struggling with



# Heatmaps

Click on avatar

My stats

Fluency



# TT Rockstars

<https://ttrockstars.com/>



## Jamming

- No timer
- Students pick the questions
- Good for raising confidence



# TT Rockstars

<https://ttrockstars.com/>



## Studio

- 1 minute long
- All tables up to 12 x 12
- Good for improving speed



# TT Rockstars

<https://ttrockstars.com/>



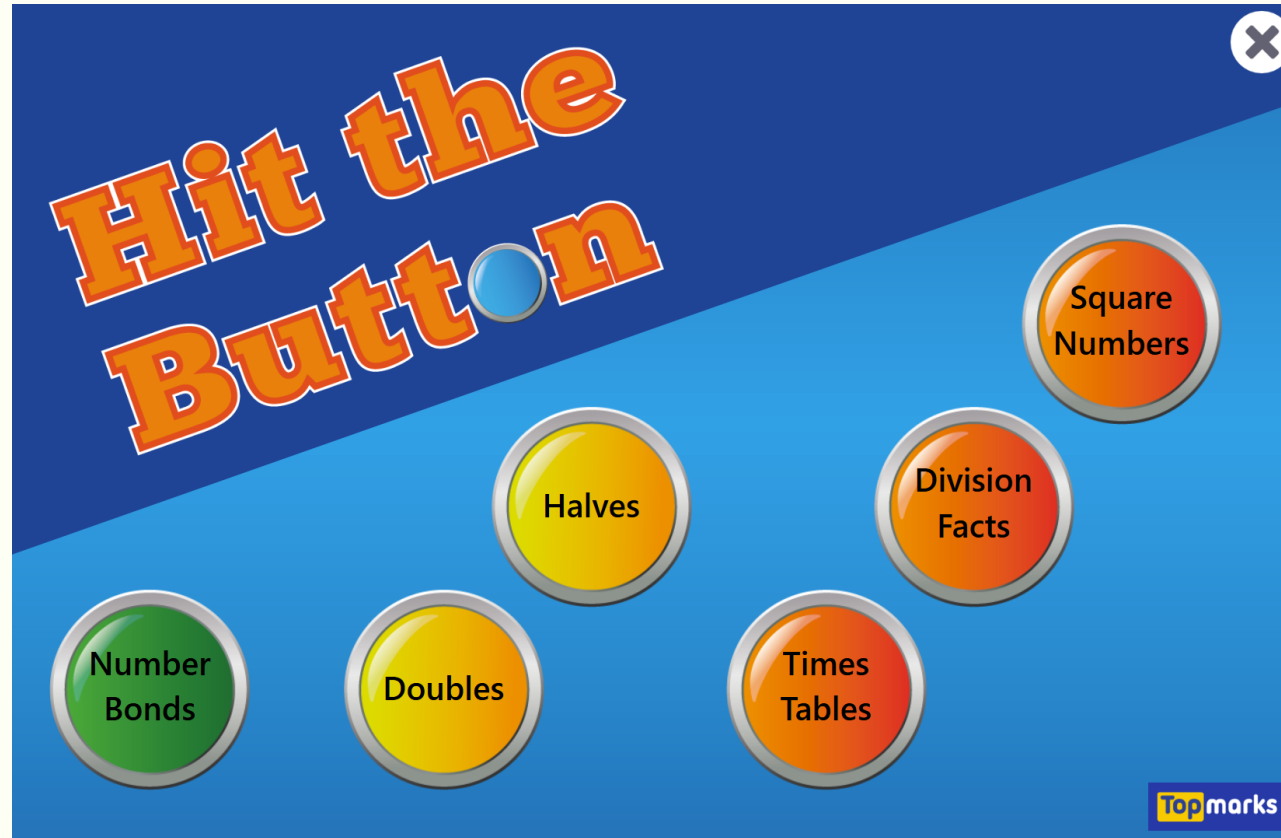
## Soundcheck

- 25 multiplication questions
- All tables up to  $12 \times 12$
- 6 seconds per question
- Same format as the multiplication timestable check in Year 4



# Topmarks - Hit the button

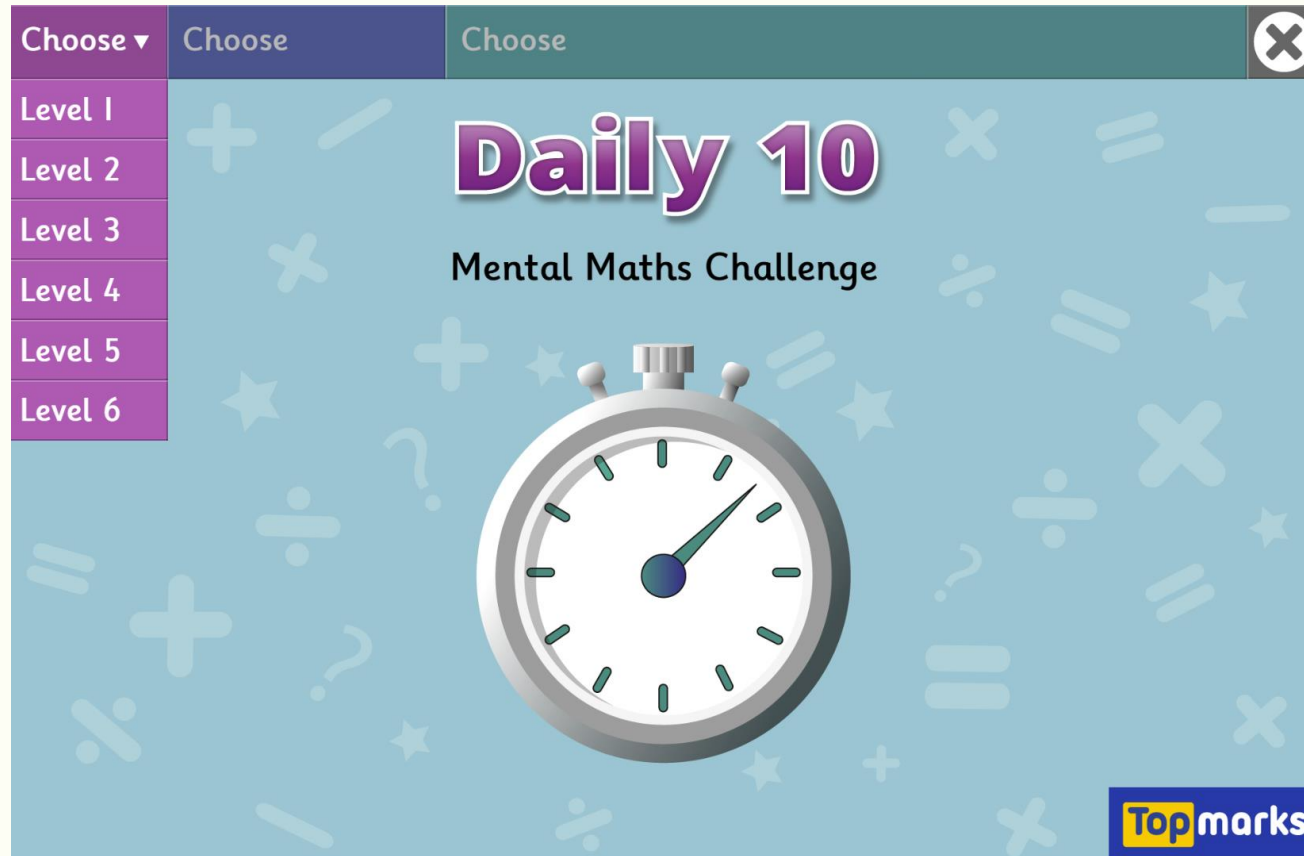
<https://www.topmarks.co.uk/maths-games/hit-the-button>





# Topmarks - Daily 10

<https://www.topmarks.co.uk/maths-games/daily10>



The screenshot shows the interface for the 'Daily 10' mental maths challenge. At the top, there are three 'Choose' buttons and a close button (X). On the left, a vertical menu lists levels from Level 1 to Level 6. The main area has a light blue background with mathematical symbols like plus, minus, multiplication, division, and equals signs, along with stars and question marks. In the center, the text 'Daily 10' is written in a large, stylized purple font, with 'Mental Maths Challenge' below it. A large stopwatch is positioned in the lower center. The Topmarks logo is in the bottom right corner.

Choose ▾ Choose Choose X

Level 1  
Level 2  
Level 3  
Level 4  
Level 5  
Level 6

**Daily 10**  
Mental Maths Challenge

Topmarks

# Maths bot

Useful for creating worksheets that you can print out. You can click on individual questions and create a new worksheet, which will generate a sheet with just that type of question.

<https://mathsbot.com/primaryMenu>

Then look for the individual year groups.

1	<input type="text"/> = $372 + 100$	<input type="radio"/>	9	<input type="text"/> = $5 \times 6$	<input type="radio"/>
2	$944 - 100 =$ <input type="text"/>	<input type="radio"/>	10	<input type="text"/> = $40 \div 5$	<input type="radio"/>
3	$26 + 90 =$ <input type="text"/>	<input type="radio"/>	11	$25 \times 3 =$ <input type="text"/>	<input type="radio"/>
4	<input type="text"/> = $233 - 60$	<input type="radio"/>	12	$95 \times 4 =$ <input type="text"/>	<input type="radio"/>
5	<input type="text"/> = $262 + 300$	<input type="radio"/>	13	<input type="text"/> = $24 \div 6$	<input type="radio"/>
6	$564 - 400 =$ <input type="text"/>	<input type="radio"/>	14	<input type="text"/> = $\frac{2}{7} + \frac{2}{7}$	<input type="radio"/>
7	$324 + 128 =$ <input type="text"/>	<input type="radio"/>	15	$\frac{5}{6} - \frac{4}{6} =$ <input type="text"/>	<input type="radio"/>
8	$974 - 385 =$ <input type="text"/>	<input type="radio"/>	16	$\frac{2}{3} - \frac{1}{3} =$ <input type="text"/>	<input type="radio"/>

# Day-to-day maths:

- Chanting times tables in the car to school
- Pick one times table question to crack and do random quizzes!
- Timestable songs on YouTube
- Baking and cooking together
- Shopping
- Telling the time, e.g. ask children to work out what time their programme will finish if they have 10 more minutes
- Word problems in everyday life, e.g. 'You've eaten two eighths of this pizza, I've eaten one eighth. How many eighths are left?'
- Maths games, e.g. dominoes, 24 game

Thank you!

Q&A

