



KS2 Mathematics

Supporting your child

Teaching for Mastery

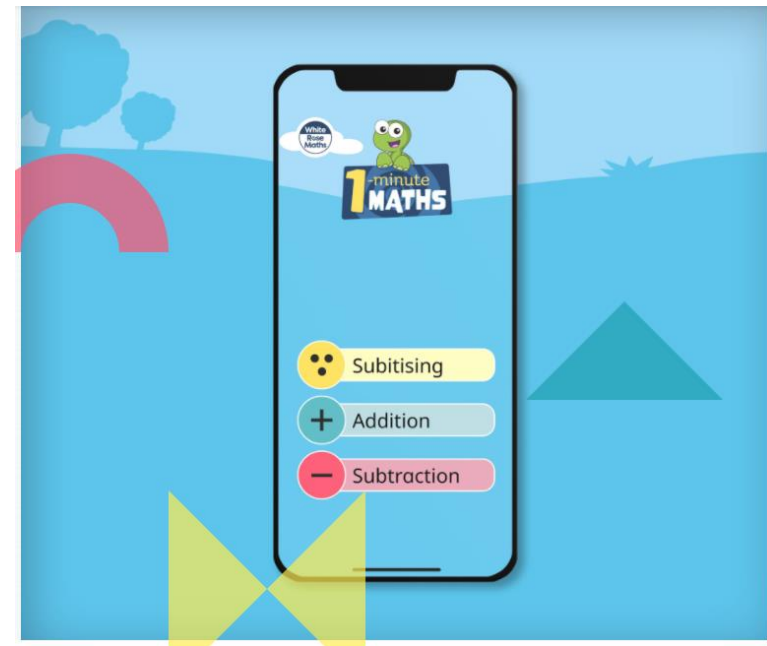
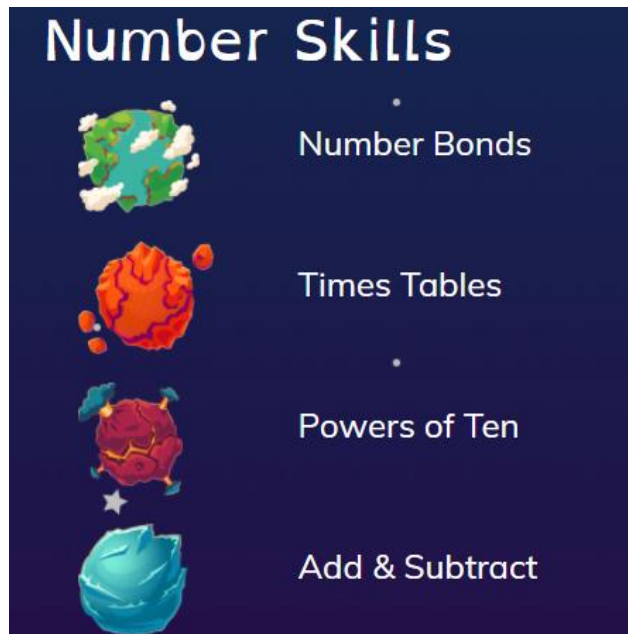
Mastering maths means pupils acquiring a **deep, long-term, secure and adaptable understanding** of the subject.

The phrase '**teaching for mastery**' describes the elements of classroom practice and school organisation that combine to give pupils the **best chances of mastering maths**.

Achieving mastery means acquiring a solid enough **understanding** of the maths that's been taught to enable pupils to move on to more **advanced material**.

Number bonds

Instant recall of number bonds within 20 and 100








ST ANDREWS

Composition of Number

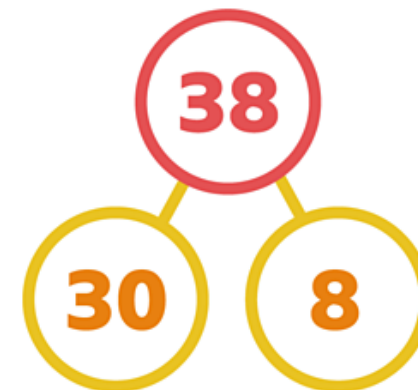
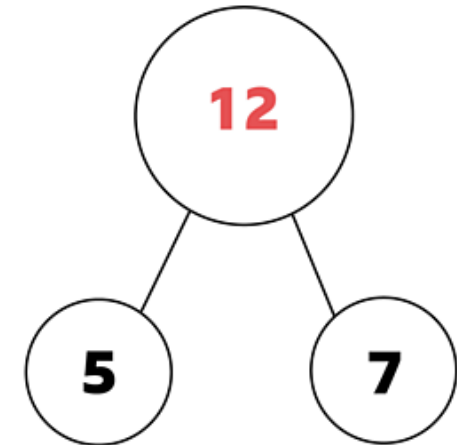
Being secure with...

- Place value of a number
- Relationship between the parts and the whole.

Ten Thousands (T Th)	Thousands (Th)	Hundreds (H)	Tens (T)	Ones (O)
				
1	3	5	4	8

Place value of 1 =	10 000
Place value of 3 =	3 000
Place value of 5 =	500
Place value of 4 =	40
Place value of 8 =	8

→ 13548



Counting

Skip counting from any number

Pattern spotting

Identifying odd and even numbers

ST ANDREWS

SKIP COUNTING by 4's

4	8	12	16	20
24	28	32	36	40
44	48	52	56	60
64	68	72	76	80
84	88	92	96	100

Multiplication Tables Check

Summer of Year 4

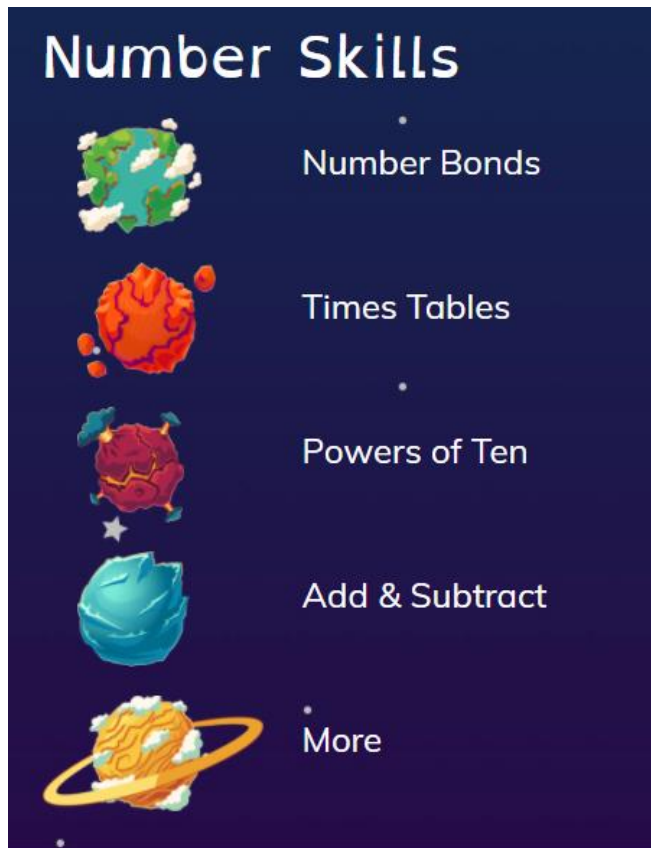
All tables up to 12

6 seconds to complete each question

STANDREWS

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

Multiplication Tables



Year 2 – 2, 5 and 10 times tables

Year 3 – 3, 4 and 8 times tables

Year 4 – 6, 7, 9, 11 and 12 times tables

Maths shed

Regular practise

Maths Passports

Time

By the end of Year 4 children should be able to:

- Read the time to the nearest minutes on an analogue clock and a clock with roman numerals.
- Convert time between an analogue clock and a digital, 24-hour clock.
- Bus and train timetables.



Money

Use coins to make an amount

Calculate change from an amount

Allow children experiences with money

ST ANDREWS



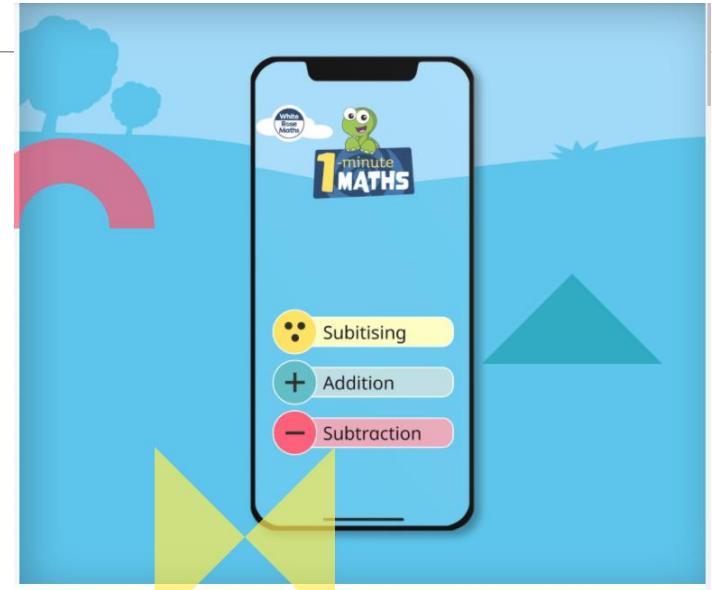
Websites

Mathletics

Maths Shed

White Rose 1 minute maths

ST ANDREWS



Be positive about maths

- **Involve your child in everyday maths**; talk about numbers/ maths around you.
- **Play lots of games**, including ordinary board games.
- **It's all about confidence** - For children to be good at maths, they need to feel confident **about giving it a go**.
- **Positivity is the key** – Regardless of your own experiences on maths at school.
- **Do maths together every day**



2019 national curriculum tests

Key stage 2

Mathematics

Paper 1: arithmetic

First name						
Middle name						
Last name						
Date of birth	Day		Month		Year	
School name						
DfE number						

36 Questions
30 Minutes

2019 national curriculum tests

Key stage 2

Mathematics

Paper 2: reasoning

First name						
Middle name						
Last name						
Date of birth	Day		Month		Year	
School name						
DfE number						

23 Questions
40 Minutes



2019 national curriculum tests

Key stage 2

Mathematics

Paper 3: reasoning

First name						
Middle name						
Last name						
Date of birth	Day		Month		Year	
School name						
DfE number						

23 Questions
40 Minutes

35	$\frac{5}{6} \times 540 =$ <div style="border: 1px solid red; height: 40px; width: 100%; margin-top: 5px;"></div>
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2019 KS2 Arithmetic paper

Fractions x integers
Around 50% correct.

- Thrown by x
- Incomplete calculations

S

34	$15\% \times 1,000 =$ <div style="border: 1px solid red; height: 40px; width: 100%; margin-top: 5px;"></div>	27	$35\% \text{ of } 320 =$ <div style="border: 1px solid red; height: 40px; width: 100%; margin-top: 5px;"></div>
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KS2 Arithmetic paper


Percentages of amounts

Around 65% correct

- Drops when the integer isn't a multiple of 100
- Less fluent children struggle in general with powers of 10.

CREWS


ST ANDREWS

33	$0.9 \times 200 =$
	

Multiplying integers by decimals

Around 65% correct

- Powers of 10 and place value
- Less confident revert to written strategy

22	$1\frac{3}{7} - \frac{4}{7} =$
	

+ and – of fractions (mixed numbers)

- x knowledge (common denominators)
- Improper fractions
- visualising

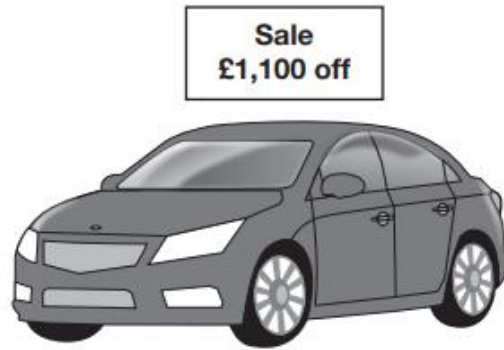
Long division?

Reasoning Papers

- Application of the arithmetic
- Geometry/Shape (angles)
- Algebra
- Ordering, comparing and rounding
- Weights and measures (conversions)
- Ratio, scale and proportion

1

The **original** price of this car is £8,999



What is the **sale** price of the car?

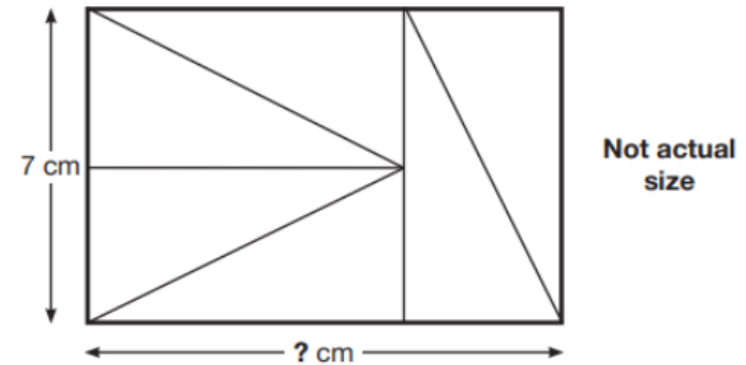
£

1 mark

EMVS

22

Six identical right-angled triangles are arranged to make a rectangle.



Calculate the **length** of the rectangle.

cm

1 mark

What can you do to help at home?

- Practise (whenever and wherever there's an opportunity)
- Use everyday situations
- Passports – they are linked to curriculum
- Mathletics
- Maths Shed
- Be positive
- Small things daily
- Encourage