



## **Aims of the session:**

- Familiarisation with the papers
- Methods used to teach methods in school
- How to support at home

# Testing In Maths



There are **3** separate Maths tests spread over **2** days

- **Paper 1** is an arithmetic test which lasts **30** minutes
- **Paper 2** is a reasoning test which lasts **40** minutes
- **Paper 3** is also a reasoning test which lasts **40** minutes

# The Arithmetic Paper



- This is a test of the calculations and methods of students including the four operations (addition, subtraction, multiplication, division, including order of operations requiring BIDMAS), percentages of amounts and calculating with decimals and fractions.

<b>1</b>	$39 + 673 =$	<input type="text"/>	<input type="checkbox"/> 1 mark


<b>23</b>	$\begin{array}{r} 836 \\ \times 27 \\ \hline \end{array}$	<input type="text"/>	<input type="checkbox"/> 2 marks
	Show your method		

# The Reasoning Papers



- A test of the application of the curriculum
- Opportunity to justify and explain thinking
- Testing all things taught during KS2


**13** A box contains 2.6 kg of washing powder.



Jack uses 65 grams of powder for each wash.  
He uses all the powder.

How many washes did Jack do?

Show your method



2 marks

# The Calculation Methods



## Addition

Ensure that all digits are aligned correctly according to place value and start with the right hand side first.

	5	6	2	1	7
+		3	9	5	8
<hr/>					
	6	0	1	7	5
<hr/>					
	1	1		1	

# The Calculation Methods



## Subtraction

Ensure that all digits are aligned correctly according to place value and start with the right hand side first. The largest number is always on top.

	<sup>3</sup> <del>4</del>	<sup>1</sup> 3	<sup>6</sup> <del>7</del>	<sup>12</sup> <del>3</del>	<sup>1</sup> 5
-		9	1	8	6
	3	4	5	4	9

# The Calculation Methods



## Multiplication

Firstly, the ones digit in the second number by each of the digits in the first number working from right to left.

Secondly, multiply the tens digit in the second number by each of the digits in the first number working from left to right. Don't forget to use a '0' as a placeholder as you are multiplying by 10.

Finally, add the two numbers together.

		1	2	4
	×		2	6
		7	4	4
		1	2	
+	2	4	8	0
	3	2	2	4
	1	1		

# The Calculation Methods



## Division

Place the number being divided inside the 'bus stop' or frame of the calculation (dividend) and the number that it is being divided by outside (divisor). The answer (quotient) will go above.

Unlike addition and subtraction, we work from the left.

If the answer has a remainder then it can be expressed as a fraction, digit or decimal.

$432 \div 5$  becomes

		8	6	r2
5	)	4	3 <sup>2</sup>	2

Answer: 86 remainder 2

$496 \div 11$  becomes

		4	5	r1	
1	1	)	4	9 <sup>5</sup>	6

Answer :  $45 \frac{1}{11}$

$621 \div 4$  becomes

	1	5	5	.	2	5
4	)	6 <sup>2</sup>	2 <sup>2</sup>	1	0 <sup>1</sup>	0 <sup>2</sup>

Answer: 155.25



# The Calculation Methods



## Add and subtract fractions

If the denominators are the same, then we simply add or subtract the numerators

$$\text{e.g. } \frac{2}{3} + \frac{2}{3} = \frac{4}{3} \text{ or } \frac{11}{3}$$



However, when the denominators are different we must find a common denominator using a common multiple which creates equivalent fractions. We then simply add or subtract the numerators.

## BIDMAS

A specific method that is used to determine what order calculations are completed.

## Multiplying fractions

To multiply fractions, simply multiply the numerators together and then multiply the denominators together.

$$\text{e.g. } \frac{2}{3} \times \frac{3}{5} = \frac{2 \times 3}{3 \times 5} = \frac{6}{15}$$

## Dividing fractions by whole numbers

To divide fractions, we multiply the fraction by the reciprocal (flipped version) of the whole number.

$$\text{e.g. } \frac{1}{3} \div 2 = \frac{1}{3 \times 2} = \frac{1}{6}$$



## Multiplying and dividing by 10, 100 and 1000

When multiplying or dividing by multiples of 10, we do not use the formal method for multiplication or division. Instead, we shift the place value to the left for multiplication or the right for division.

$$\text{E.g. } 1345 \times 10 = 13,450$$

$$2.987 \times 100 = 298.7$$

$$34.776 \div 1000 = 34.776$$

$$22.43 \div 10 = 2.243$$

Are there  
any  
questions  
regarding  
these  
methods?

# How to Support at Home



- Times tables by using TTRockstars  
[www.ttrockstars.com](http://www.ttrockstars.com)
- Completing maths.co.uk homework that is given each week
- Supporting them with telling the time and asking time related questions
- [www.mathsbot.com/primary/ks2](http://www.mathsbot.com/primary/ks2) free generator of arithmetic questions with answers and can be marked