



# Year 5 and 6 maths parents workshop

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# Aims of the session

- Overview of Year 5 and 6 maths
- Go through the methods that are used in Year 5 and 6
- How you can support your child in maths at home

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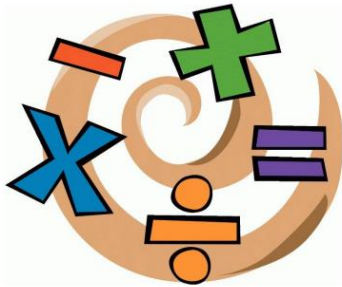


# Our curriculum

Written Calculation Methods  
Middleton Primary School

ADDITION

SUBTRACTION



MULTIPLICATION

DIVISION

Our curriculum is mapped out and sequenced to ensure that all children cover the national curriculum objectives. We follow our calculation policy and the skills progression document (both of which can be found on the website)

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# Our curriculum

Our curriculum is split into two parts: fluency and reasoning. Throughout all of this, we link our maths back to real-life.

22	3445 ÷ 53									
Show your method										
			1	3	3	4	4	5		

1. Here are some bags of fruit sold in a supermarket. Calculate the cost and weight of each item of fruit.



16

potatoes £1.50 per kg      carrots £1.80 per kg

Jack buys  $\frac{1}{2}$  kg of potatoes and  $\frac{1}{2}$  kg of carrots.

How much change does he get from £5?

Show your method

£
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2 marks

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# Year 6 SATs

2018 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				



National curriculum tests  
**Key stage 2**

**Mathematics**  
Paper 2: reasoning

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



**SAMPLE BOOKLET**  
Published July 2015

This sample test is identical to the national curriculum tests used from 2016.  
Further information is available on [www.gov.uk/sats](http://www.gov.uk/sats)



2018 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				



At the end of KS2 the maths SATs comprise of an arithmetic paper and 2 reasoning papers.

These can test the knowledge of anything from Year 3-6.

There is a meeting next half term to talk through Year 6 SATs.

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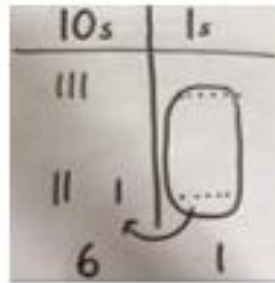
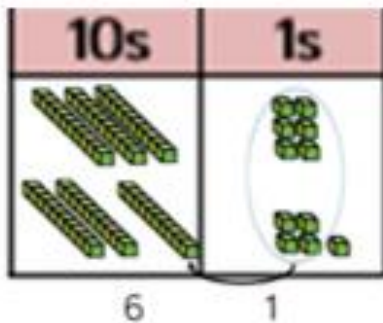
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# Addition

## Step 5

Understanding why we  
"carry the one"  
Column addition



Use shorter column method

$$\begin{array}{r}
 1499 \\
 +1123 \\
 \hline
 2622 \\
 11
 \end{array}$$

## Step 6

Column addition including  
decimals  
Addition up to 6 digits

$$\begin{array}{r}
 1628.9 \\
 + 117.25 \\
 \hline
 1746.15 \\
 11
 \end{array}$$

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# Subtraction

Step 5  
Using the "borrowing"  
method

$$\begin{array}{r} 2433 \overset{3}{\cancel{4}} 16 \\ - 12327 \\ \hline 12019 \end{array}$$

Step 6  
Continue to use this method  
Including decimals

$$1628.90 - 117.25 = 1511.65$$

$$\begin{array}{r} 1628. \overset{8}{\cancel{9}} 10 \\ - 117.25 \\ \hline 1511.65 \end{array}$$

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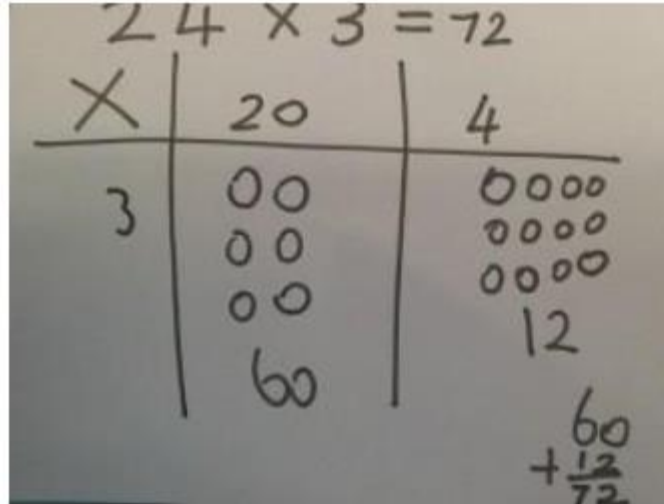
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# Multiplication

Step 5  
Counter method  
Grid method



Abstract

<b>X</b>	<b>30</b>	<b>5</b>
<b>7</b>	<b>210</b>	<b>35</b>

$$210 + 35 = 245$$

X	1000	300	40	2
10	10000	3000	400	20
8	8000	2400	320	16

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# Multiplication

Step 6  
Column method  
Including decimals

$$\begin{array}{r} 1632 \\ \times \phantom{000}7 \\ \hline 11424 \\ \phantom{114}421 \\ \hline \end{array}$$

$$\begin{array}{r} 1632 \\ \times \phantom{000}87 \\ \hline 11424 \\ \phantom{114}421 \\ \hline \end{array}$$

$$\begin{array}{r} 130560 \\ \times \phantom{000}521 \\ \hline 130560 \\ \phantom{13056}0640 \\ \phantom{130560}65280 \\ \hline 141984 \\ \hline \end{array}$$

$$\begin{array}{r} 3.26 \\ \times \phantom{00}3 \\ \hline 9.78 \\ \phantom{9.78}1 \\ \hline \end{array}$$

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# Division

Begin with calculations with no remainders.

Step 5  
Bus stop method  
Up to dividing by 12

$$\begin{array}{r} 218 \\ 4 \overline{) 872} \\ \underline{8} \phantom{00} \\ 07 \phantom{0} \\ \underline{06} \phantom{0} \\ 012 \\ \underline{012} \\ 000 \end{array}$$

Move onto calculations with remainders.

$$\begin{array}{r} 86 \text{ r } 2 \\ 5 \overline{) 432} \\ \underline{0} \phantom{00} \\ 43 \phantom{0} \\ \underline{40} \phantom{0} \\ 032 \\ \underline{025} \\ 007 \end{array}$$

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# Division

Step 6

Bus stop method (up to 12)

Written as a fraction

Decimal

Long division

$$\begin{array}{r} 086\frac{2}{5} \\ 5 \overline{) 43^3 2} \end{array}$$

$$\begin{array}{r} 086.4 \\ 5 \overline{) 43^3 2.0} \end{array}$$

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# Division

Step 6

Bus stop method (up to 12)

Written as a fraction

Decimal

Long division

Handwritten long division showing the calculation of  $3927 \div 16$ . The result is  $245 \frac{7}{16}$ . The quotient digits 2, 4, and 5 are circled. The remainder 7 is also circled. The fraction  $\frac{7}{16}$  is written to the right of the decimal point.

$$\begin{array}{r} 245 \frac{7}{16} \\ 16 \overline{) 3927} \\ \underline{-32} \phantom{0} \phantom{0} \phantom{0} \\ 064 \phantom{0} \phantom{0} \phantom{0} \\ \underline{-64} \phantom{0} \phantom{0} \phantom{0} \\ 087 \phantom{0} \phantom{0} \phantom{0} \\ \underline{-80} \phantom{0} \phantom{0} \phantom{0} \\ 7 \phantom{0} \phantom{0} \phantom{0} \end{array}$$

On the right side, the steps of the bus stop method are shown with circled numbers:

$$\begin{array}{r} (16) \\ (32) \\ +16 \\ \hline (48) \\ +16 \\ \hline (64) \\ +16 \\ \hline (80) \\ + \end{array}$$

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# BODMAS

## Order of Operations

<b>B</b>	<b>Brackets</b>	$10 \times (4 + 2) = 10 \times 6 = 60$
<b>O</b>	<b>Order</b>	$5 + 2^2 = 5 + 4 = 9$
<b>D</b>	<b>Division</b>	$10 + 6 \div 2 = 10 + 3 = 13$
<b>M</b>	<b>Multiplication</b>	$10 - 4 \times 2 = 10 - 8 = 2$
<b>A</b>	<b>Addition</b>	$10 \times 4 + 7 = 40 + 7 = 47$
<b>S</b>	<b>Subtraction</b>	$10 \div 2 - 3 = 5 - 3 = 2$

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# Fractions

Adding and subtracting fractions

$$\frac{2}{9} + \frac{5}{9} = \frac{7}{9}$$

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$$\frac{2}{3} + \frac{1}{6} =$$

$\times 2$  (arrow pointing to denominator 3)

$$\frac{4}{6} + \frac{1}{6} = \frac{5}{6}$$

---

$$\frac{1}{4} + \frac{2}{6} =$$

$\times 3$  (arrow pointing to denominator 4) and  $\times 2$  (arrow pointing to denominator 6)

$$\frac{3}{12} + \frac{4}{12} = \frac{7}{12}$$

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# Fractions

Multiply fractions

$$\frac{2}{3} \times \frac{1}{6} = \frac{2 \times 1}{3 \times 6}$$
$$= \frac{2}{18}$$
$$= \frac{1}{9}$$

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# Fractions

Divide fractions

Keep it, change it, flip it

$$\begin{aligned}\frac{2}{5} \div \frac{1}{4} &= \frac{2}{5} \times \frac{4}{1} \\ &= \frac{2 \times 4}{5 \times 1} \\ &= \frac{8}{5} \\ &= 1\frac{3}{5}\end{aligned}$$

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# Fractions

Mixed and improper fractions

Handwritten mathematical examples on a grey background:

Left side: A mixed fraction  $2\frac{3}{5}$  is shown above a plus sign. Below the plus sign, the mixed fraction  $2\frac{3}{5}$  is written with a bracket under the 2 and 3, and an arrow pointing to the denominator 5. Below this is the improper fraction  $\frac{13}{5}$ . A small 'x' is written below the mixed fraction.

Right side: An improper fraction  $\frac{17}{4}$  is shown above a question mark. Below the question mark, the improper fraction  $\frac{17}{4}$  is written with a bracket under the 17 and an arrow pointing to the denominator 4. Below this is the mixed fraction  $4\frac{1}{4}$ .

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# Percentages

Splitting it

Divide by 100  
X by top

$$15\% \text{ of } 120 =$$

$$10\% = 120 \div 10 = 12.$$

$$5\% = 12 \div 2 = \frac{6}{18.}$$

$$15\% \text{ of } 120$$

$$\frac{15}{100} \text{ of } 120 =$$

$$(120 \div 100) \times 15$$
$$1.2 \times 15 = 18.$$

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# What can I do to support my child?

- Times Tables practice and recall
- Maths in real life
- Get them to talk you through it

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