Westbury Park School

Year 6

Methods and Representations

At Westbury Park School, we follow the White Rose scheme of learning. This scheme allows us to ensure total coverage of the curriculum, appropriate knowledge and skills progression and offers a range of methods and representations to support arithmetic and problem solving.

This booklet offers you an example of how methods for the four operations are taught and used within your child's year group.

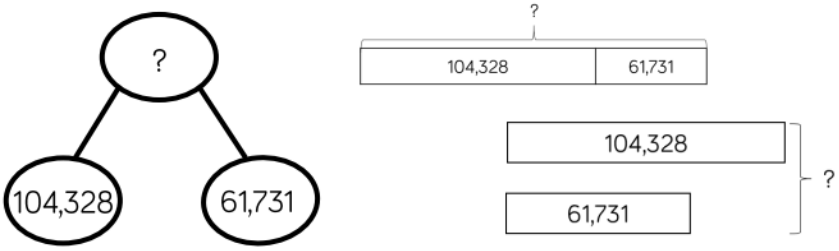
For videos showing the maths in action, please click on the links throughout the booklet.

Addition

Children are encouraged to draw bar models, part whole models and number sentences to represent their understanding of the calculation.

The formal written method of column addition is then used to solve the calculation.

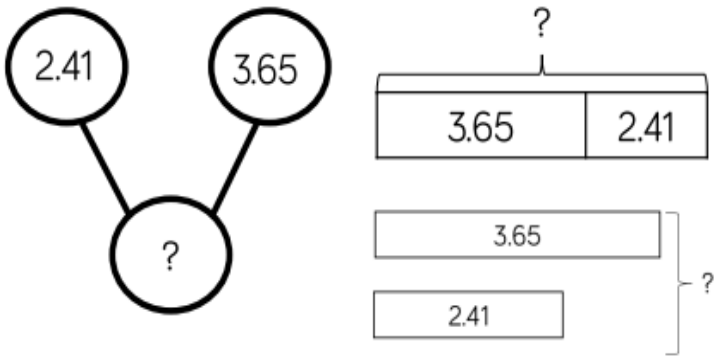
Adding numbers with more than 4 digits
Click here for the video



$$104{,}328 + 61{,}731 = 166{,}059$$

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

Addition of up to 3dp
Click here for the video



$$\begin{array}{r} 3.65 \\ +\ 2.41 \\ \hline 6.06 \\ \hline 1 \end{array}$$

$$3.65 + 2.41 = 6.06$$

Subtraction

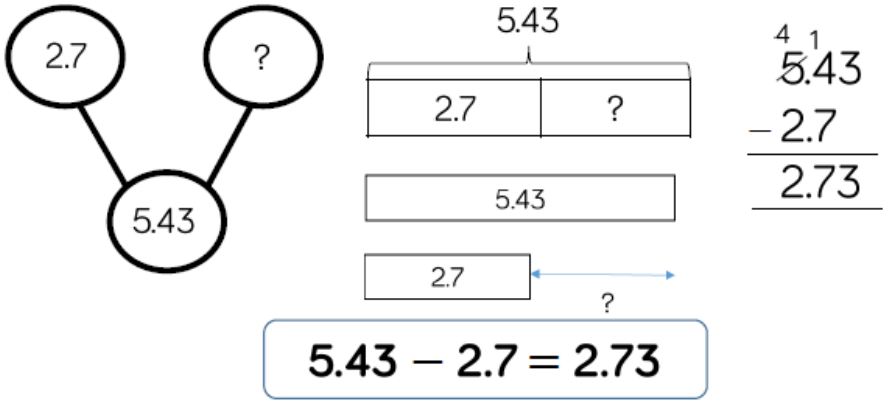
Children are encouraged to draw bar models, part whole models and number sentences to represent their understanding of the calculation.

The formal written method of column subtraction is used to solve the calculation.

Subtract numbers with more than 4 digits
Click here for the video

	2	9	$^{3}\not{4}$	$^{1}3$	8	2
−	1	8	2	5	0	1
	1	1	1	8	8	1

Subtract numbers with up to 3dp
Click here for the video



Multiplication

Children are encouraged to mentally solve some multiplication calculations including multiplying by 10,100 and 1000 and using their number facts up to 12 x 12.

The formal written method of long multiplication is used to solve the calculation.

Multiply 4 digit numbers by 2 digit numbers
Click here for the video

TTh	Th	H	T	O
	2	7	3	9
×			2	8
2 (2)	1 (5)	9 (3)	1 (7)	2
5 (1)	4	7 (1)	8	0
7	6	6	9	2
		1		

$2{,}739 \times 28 = 76{,}692$

Multiplying decimals
Click for the video

Division

Children are encouraged to use their times table facts to aid them in their division. The relationship between division and multiplication is referred back to throughout teaching.

The formal written method of long division is introduced in Year 6.

Divide 4 digits by 1 digit (short division)
Click here for video

	4	2	6	6
2	8	5	$^{1}3$	$^{1}2$

Divide multi digits by 2 digit numbers (long division- preferred)
Click here for video

		0	3	6
1	2	4	3	2
	–	3	6	0
			7	2
	–		7	2
				0

(×30)

(×6)

$12 \times 1 = 12$
$12 \times 2 = 24$
$12 \times 3 = 36$
$12 \times 4 = 48$
$12 \times 5 = 60$
$12 \times 6 = 72$
$12 \times 7 = 84$
$12 \times 8 = 96$
$12 \times 7 = 108$
$12 \times 10 = 120$

$$432 \div 12 = 36$$

Divide multi digits by 2 digit numbers (short division)

		0	3	6
	12	4	$^{4}3$	$^{7}2$

$$432 \div 12 = 36$$