



Briercliffe Primary School

Years 5 & 6

**Maths - How can you help your
child at home?**



Why should we support mathematics at home?

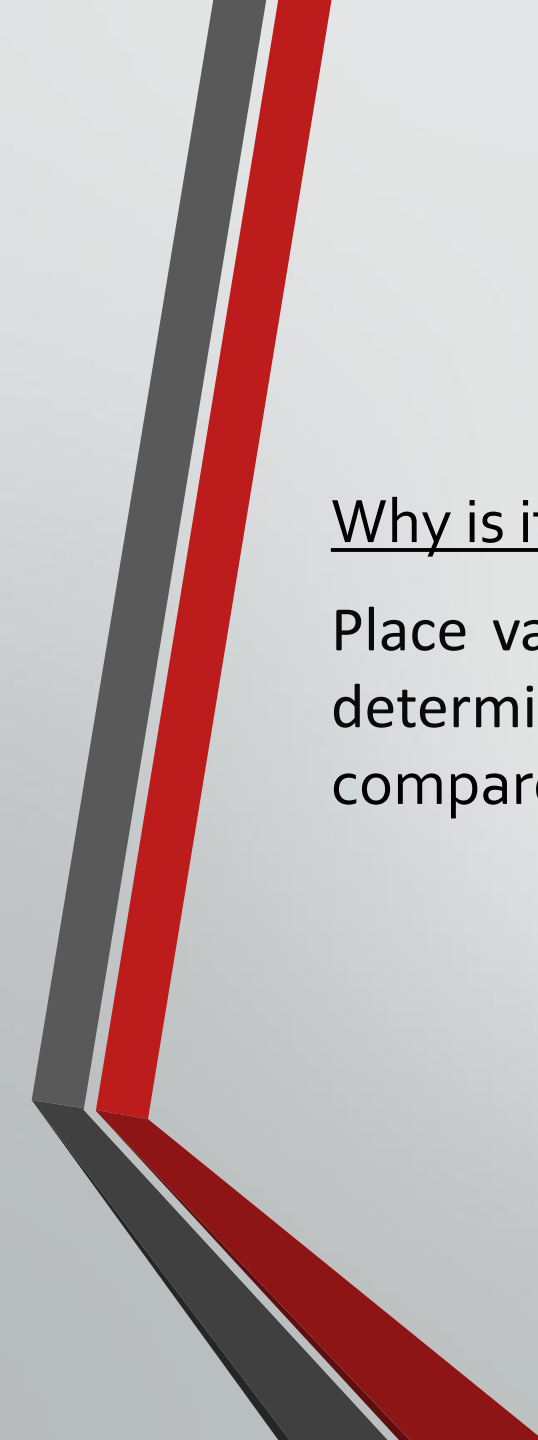
Reasoning and arithmetic enables children to solve everyday problems and improves memory.



Basic Skills

The following are basic skills that we teach in school:

- Counting
- Representing numbers
- Addition and subtraction facts
- Multiplication and division facts
- Multiply and divide by 10, 100 and 1000



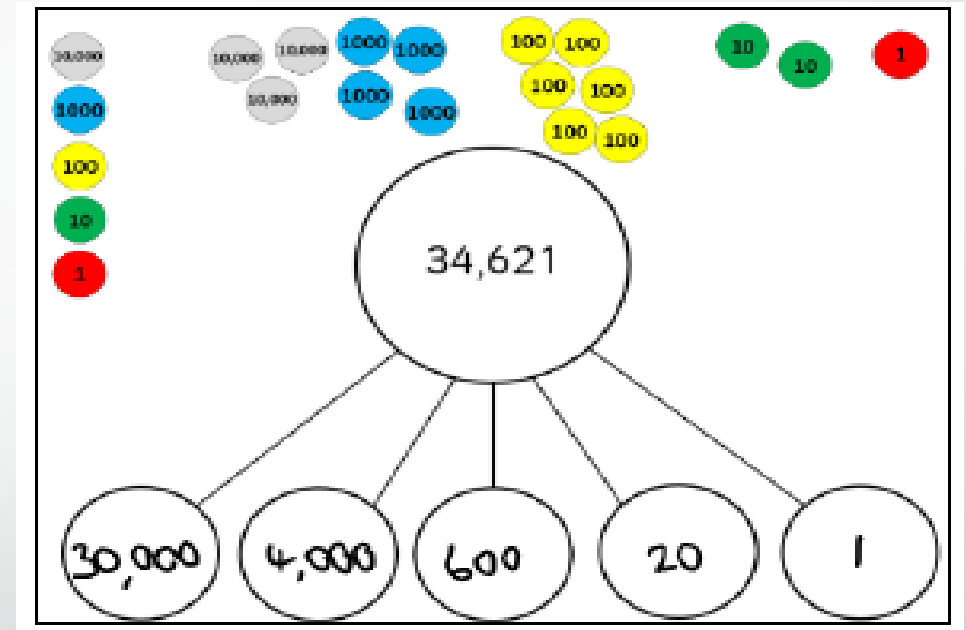
Place Value in Year 5 (the value of number)

Why is it important?

Place value is the foundation of our number system. We need to be able to determine a digit's worth based on its position. It allows us to represent and compare numbers of any size and enable access to the four operations (+ - x ÷).

What does it look like in school?

	10,000	1,000	100	10	1
	tens of thousands	thousands	hundreds	tens	ones
	10,000 10,000	1,000 1,000 1,000 1,000 1,000	100 100 100 100	10 10 10	1 1 1 1 1
	2	5	4	3	5





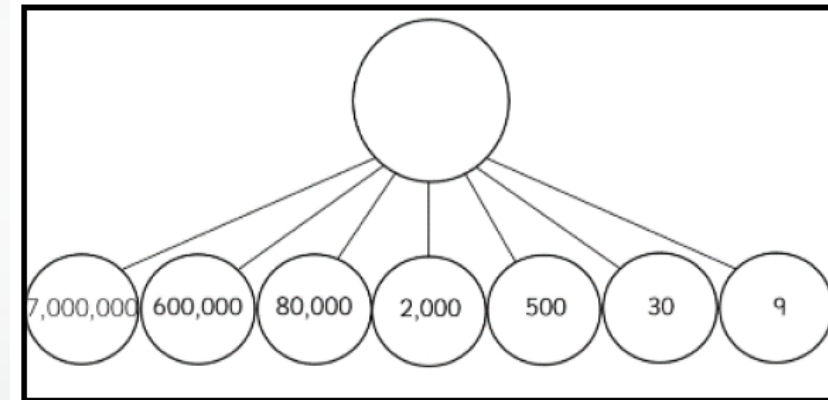
How can I help at home?

Place Value in Year 6 (the value of number)

What does it look like in school?

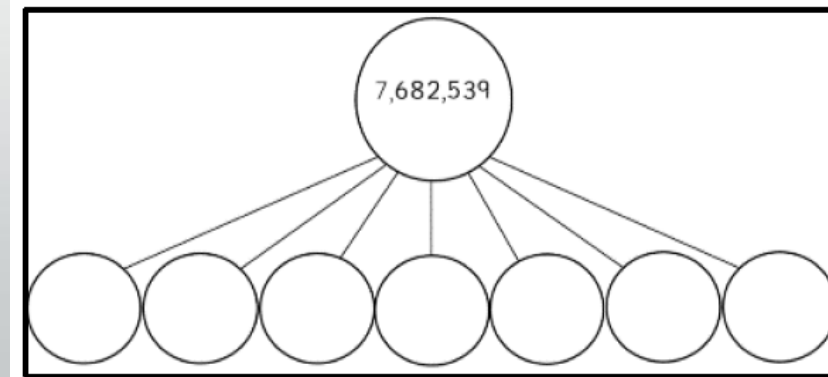
●

millions	thousands			ones		
units of millions	hundreds of thousands	tens of thousands	units of thousands	hundreds	tens	units
2	4	1	5	4	6	1



●

millions	thousands			ones		
units of millions	hundreds of thousands	tens of thousands	units of thousands	hundreds	tens	units
2	4	1	5	4	6	1





How can I help at home?

Addition in Year 5

What does it look like in school

Y5

End of Year Objective:

Add whole numbers with more than 4 digits *and* decimals with two decimal places, including formal written methods (columnar addition).

Children should continue to use the carrying method to solve calculations such as:

$$\begin{array}{r} 3364 \\ + 247 \\ \hline 3611 \\ \hline 11 \end{array}$$

$$\begin{array}{r} 3121 \\ 37 \\ + 148 \\ \hline 3306 \\ \hline 11 \end{array}$$

$$\begin{array}{r} 3.56 \\ + 2.47 \\ \hline 6.03 \\ \hline 1 \end{array}$$

They will also be adding:

- several numbers with different numbers of digits, understanding the place value;
- *decimals with up to two decimal places (with each number having the same number of decimal places), knowing that the decimal points line up under one another.*
- amounts of money and measures, including those where they have to initially convert from one unit to another



How can I help at home?

Addition in Year 6

Y6

End of Year Objective:

Add whole numbers and decimals using formal written methods (columnar addition).

Children should extend the carrying method and use it to add whole numbers and decimals with any number of digits.

$$\begin{array}{r} 42 \\ 6432 \\ 786 \\ 3 \\ + 4681 \\ \hline \end{array}$$

$$\begin{array}{r} 401.20 \\ 26.85 \\ + 0.71 \\ \hline 428.76 \\ \hline \end{array}$$

When adding decimals with different numbers of decimal places, children should be taught and encouraged to make them the same through identification that 2 tenths is the same as 20 hundredths, therefore, 0.2 is the same value as 0.20.

They will also be adding:

- several numbers with different numbers of digits, understanding the place value;
- decimals with up to two decimal places (with mixed numbers of decimal places), knowing that the decimal points line up under one another.
- amounts of money and measures, including those where they have to initially convert from one unit to another.



How can I help at home?

Subtraction in Year 5

What does it look like in school?

Y5

End of Year Objective:

Subtract whole numbers with more than 4 digits and decimals with two decimal places, including formal written methods (columnar subtraction).

Children should continue to use the decomposition method to solve calculations such as:

$$\begin{array}{r} \overset{6}{7} \text{ } \overset{6}{10} \text{ } \overset{6}{7} \text{ } \overset{6}{12} \\ - 3 \text{ } 2 \text{ } 2 \text{ } 6 \\ \hline 3 \text{ } 8 \text{ } 4 \text{ } 6 \end{array}$$

$$\begin{array}{r} \overset{2}{3} \text{ } \overset{13}{4} \text{ } \overset{6}{12} \\ - 1 \text{ } . \text{ } 7 \text{ } 6 \\ \hline 1 \text{ } . \text{ } 6 \text{ } 6 \end{array}$$

They will also be subtracting:

- numbers with different numbers of digits, understanding the place value;
- decimals with up to two decimal places (with each number having the same number of decimal places), knowing that the decimal points line up under one another.
- amounts of money and measures, including those where they have to initially convert from one unit to another



How can I help at home?

Subtraction in Year 6

Y6

End of Year Objective:

Subtract whole numbers and decimals using formal written methods (columnar subtraction).

Children should extend the decomposition method and use it to subtract whole numbers and decimals with any number of digits.

$$\begin{array}{r} 5 13 \\ \hline 64132 \\ - 4681 \\ \hline 1751 \end{array}$$

$$\begin{array}{r} 3 6 11 \\ \hline 4117.210 \\ - 34.71 \\ \hline 382.49 \end{array}$$

When subtracting decimals with different numbers of decimal places, children should be taught and encouraged to make them the same through identification that 2 tenths is the same as 20 hundredths, therefore, 0.2 is the same value as 0.20.

They will also be subtracting:

- numbers with different numbers of digits, understanding the place value;
- decimals with up to two decimal places (with mixed numbers of decimal places), knowing that the decimal points line up under one another.
- amounts of money and measures, including those where they have to initially convert from one unit to another.



How can I help at home?

Multiplication in Year 5

What does it look like in school?

Y5

End of Year Objective:

Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers.

Children should continue to use the grid method and extend it to multiplying numbers with up to four digits by a single digit number, e.g.

4346 x 8

x	4 000	300	40	6	
8	32 000	2400	320	48	
					32000
					+ 2400
					+ 320
					+ 48
					<hr/> 34768

and numbers with up to four digits by a two-digit number, e.g.

and numbers with up to four digits by a two-digit number, e.g.

2693 x 24

x	2000	600	90	3	
20	40000	12000	1800	60	
4	8000	2400	360	12	
					40000
					+ 8000
					+ 12000
					+ 2400
					+ 1800
					+ 360
					+ 60
					+ 12
					<hr/> 64632

When children are working with numbers where they can confidently and correctly calculate the addition (or parts of the addition) mentally, they may do so.

Children should also be using this method to solve problems and multiply numbers in the context of money or measures.



How can I help at home?

Multiplication in Year 6

Y6

End of Year Objective:

Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.

By the end of Y6, children should be able to use the grid method to multiply any number by a two-digit number. They should also develop the method to be able to multiply decimal numbers with up to two decimal places, e.g.

4.92 x 3

x	4	0.9	0.02
3	12	2.7	0.06

$$\begin{array}{r} 12 \\ + 2.7 \\ + 0.06 \\ \hline 14.76 \end{array}$$

When children are working with numbers where they can confidently and correctly calculate the addition (or parts of the addition) mentally, they may do so.

Children should also be using this method to solve problems and multiply numbers, including those with decimals, in the context of money or measures, e.g. to calculate the cost of 7 items at £8.63 each, or the total length of six pieces of ribbon of 2.28m each.

COLUMN METHOD

TONY



How can I help at home?

Division in Year 5

What does it look like in school?

Y5

End of Year Objective:

Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context.

Children may continue to use the key facts box for as long as they find it useful. Using their knowledge of linked tables facts, children should be encouraged to use higher multiples of the divisor. Any remainders should be shown as integers, e.g.

$$523 \div 8$$

$$\begin{array}{r} 65r3 \\ 8 \overline{) 523} \\ - 320 \\ \hline 203 \\ - 160 \\ \hline 43 \\ - 40 \\ \hline 3 \end{array}$$

By the end of year 5, children should be able to use the chunking method to divide a four-digit number by a single digit number. If children still need to use the key facts box, it can be extended to include 100x.

$$2458 \div 7$$

$$\begin{array}{r} 351r1 \\ 7 \overline{) 2458} \\ - 2100 \\ \hline 358 \\ - 350 \\ \hline 8 \\ - 7 \\ \hline 1 \end{array}$$

Children should be able to solve real life problems including those with money and measures. They need to be able to make decisions about what to do with remainders after division and round up or down accordingly.

Bus stop method- Tony



How can I help at home?

Division in Year 6

Y6

End of Year Objective:

Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context.

To develop the chunking method further, it should be extended to include dividing a four-digit number by a two-digit number, e.g.

$$6367 \div 28$$

$$\begin{array}{r} 227r11 \\ 28 \overline{)6367} \\ \underline{-5600} \\ 767 \\ \underline{-560} \\ 207 \\ \underline{-140} \\ 67 \\ \underline{-56} \\ 11 \end{array}$$

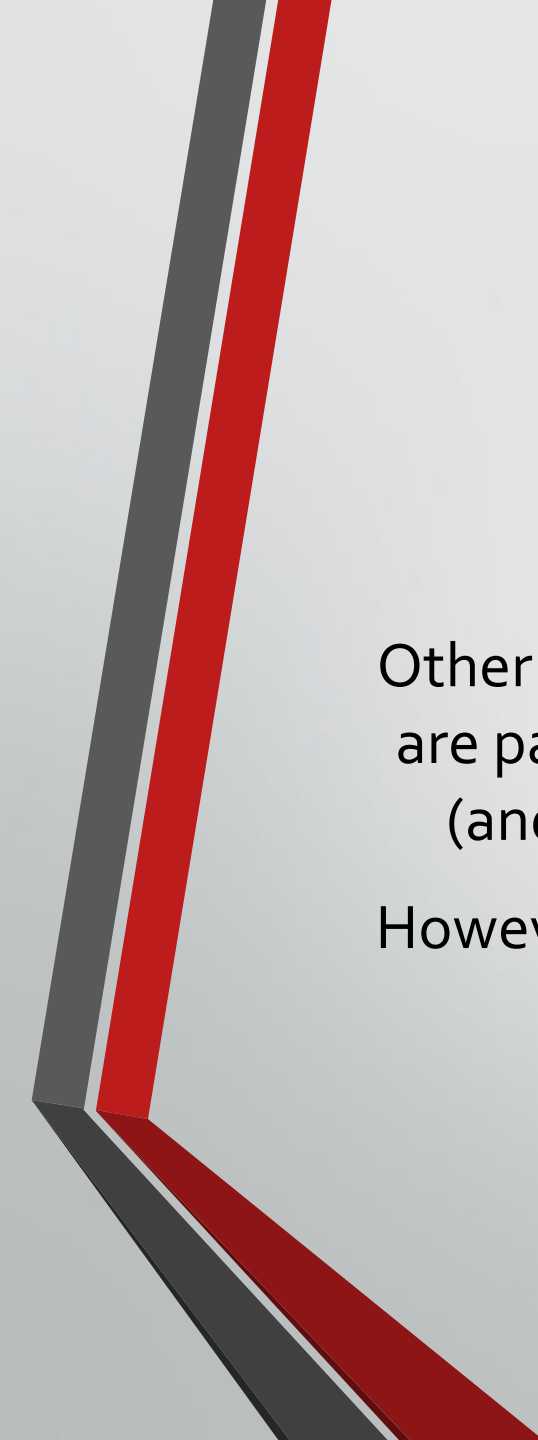
200x
20x
5x
2x

HELP BOX
WITH
TIMES
TABLES

Children should be able to solve real life problems including those with money and measures. They need to be able to make decisions about what to do with remainders after division and round up or down accordingly.



How can I help at home?



Why have we not included other areas of mathematics?

Other areas of maths are important but place value and the four operations are paramount for our children's future. Shape, angles, fractions, measure (and others) all have a place in our curriculum but these rarely change.

However, the processes for $+$ $-$ \times and \div do and is the reason we want to offer this guidance.

Still unsure? Get in touch with your child's teacher.