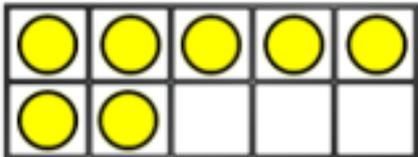
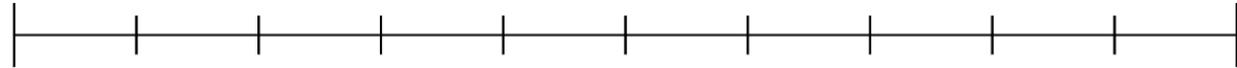
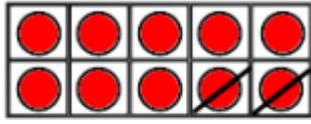
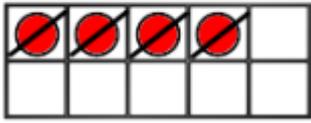


Parkwood Primary's Calculation Policy (Subtraction)

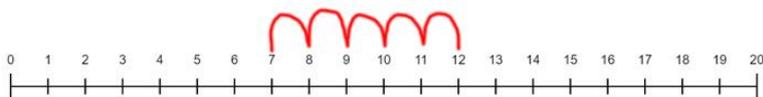
Vocabulary for Subtraction	<ul style="list-style-type: none"> • Equal to • Take • Take away • Less • Minus • Subtract • Leaves • Fewer • Less than • Least • Count back • The same as 	<ul style="list-style-type: none"> • How many left • How many less • Difference • decrease • Number line • Tens frame • Exchange (note: do not use 'borrow' or 'take') • Hundred thousand • Ten thousand • Thousands • Hundreds • Tens 	<ul style="list-style-type: none"> • Ones • Number (made up of digits) • Digits • Inverse (opposite/from Year 3 onwards) • Estimate (from Year 3/round to estimate more accurately from Year 5 onwards) • Decimal point • Tenths • Hundredths • Thousandth
FS	<p>When exploring number related learning, use tens frames or simple number lines.</p> <div style="display: flex; align-items: center; margin-bottom: 10px;">  </div> <div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">0</div> <div style="margin-right: 10px;">1</div> <div style="margin-right: 10px;">2</div> <div style="margin-right: 10px;">3</div> <div style="margin-right: 10px;">4</div> <div style="margin-right: 10px;">5</div> <div style="margin-right: 10px;">6</div> <div style="margin-right: 10px;">7</div> <div style="margin-right: 10px;">8</div> <div style="margin-right: 10px;">9</div> <div>10</div> </div> 		
Year 1	<p>Subtract a one-digit number from a two-digit number to 20, including zero Use tens frame so that children can visually represent the digits within the calculation.</p> <p>14 - 6 =</p> <div style="display: flex; flex-direction: column; align-items: center; margin-bottom: 10px;">  </div> 		

Year 1

Subtract a one-digit number from a two-digit number to 20, including zero

Use numbered number lines to subtract by counting back in ones.

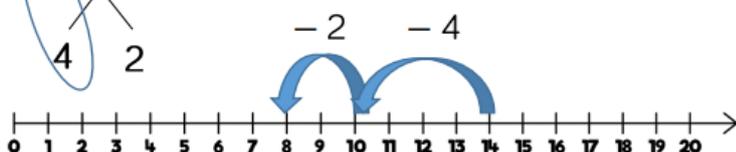
$$12 - 5 = 7$$



Children can start by counting back in ones on the number line. Progressing further, children can subtract numbers by jumping to the nearest 10 and then jumping to what's left.

$$14 - 6 = 8$$

Diagram showing 14 split into 10 and 4, and 6 split into 4 and 2.

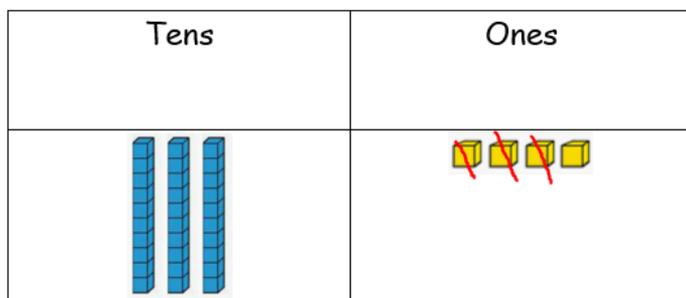


Year 2

Subtract a two-digit number and ones

- Children need to be taught that subtraction is not commutative
- Children need to be taught the inverse relationship between addition and subtraction
- Add/combine tens and ones when answers have been found

$$34 - 3 =$$

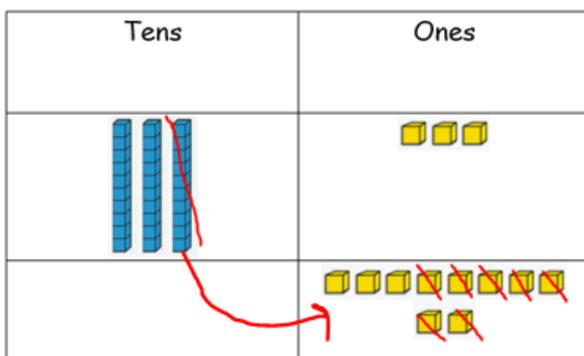


30

1

When bridging through 10-

$$33 - 7 =$$



20

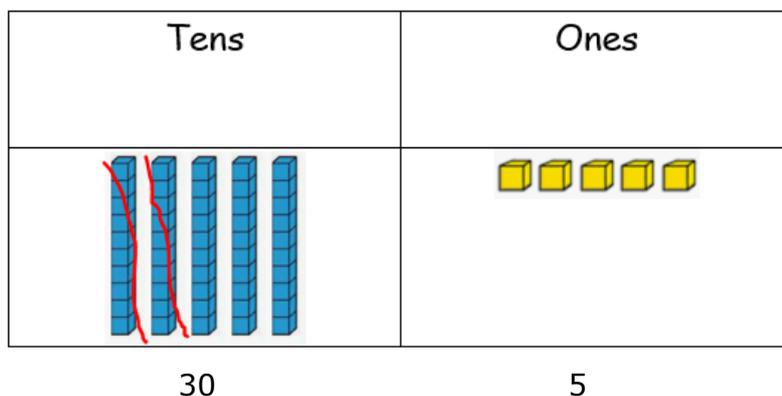
6

Children to use base 10 to make/draw the two-digit number. Discuss how we do not subtract 7 from 3 because 7 has greater value. We need to **exchange** one ten for ten ones. We can then complete the subtraction.

Do not use terminology 'we can not subtract 7 from 3.' Children will do this is **KS2 when looking at negative numbers.**

Subtract two-digit numbers and tens

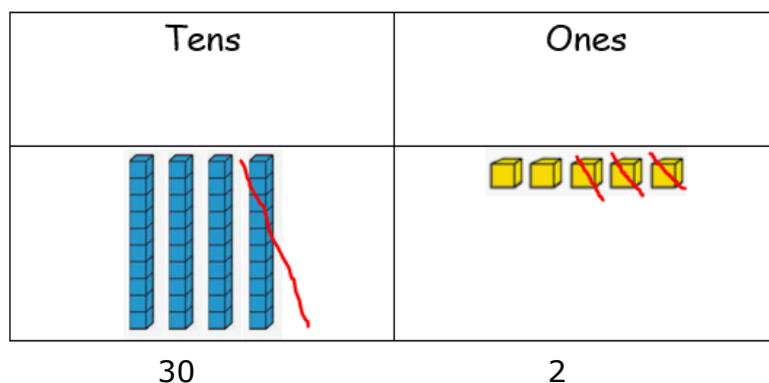
$$55 - 20 =$$



Year 2

Subtract two two-digit numbers

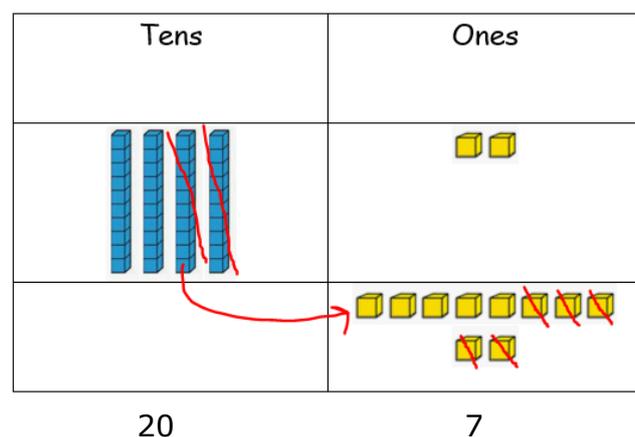
$$45 - 13 =$$



Year 2

Bringing through 10-

$$42 - 15 =$$



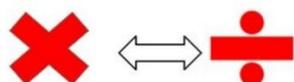
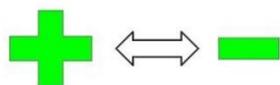
From Year 3 onwards, children should be actively encouraged to make an estimate before calculating.

Estimate

Calculate

Check (inverse can be used)

They should also be using the inverse as a way of checking answers from Year 3 onwards confidently (this learning begins in Year 2)

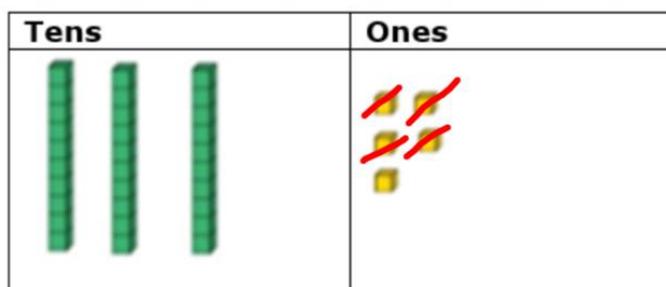


Subtract numbers with up to three digits using a formal written method (two-digit number add a one-digit number with no exchange)

***Starting with no exchange will ease them into the method.**

***Remember to remind children to fill any gaps with zeroes.**

Year 3



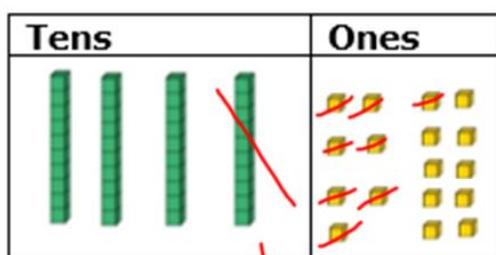
	T	O
	3	5
-	0	4
	3	1

Subtract numbers with up to three digits using a formal written method (two-digit number subtract a one-digit number with one exchange)

$$47 - 8 =$$

Estimate: $40 - 10 = 30$

Year 3



	T	O
	3	4
-	0	8
	3	9

Year 3

Subtract numbers with up to three digits using a formal written method (two-digit number subtract a two-digit number with no exchange)

$$74 - 23 =$$

Estimate: $70 - 20 = 50$



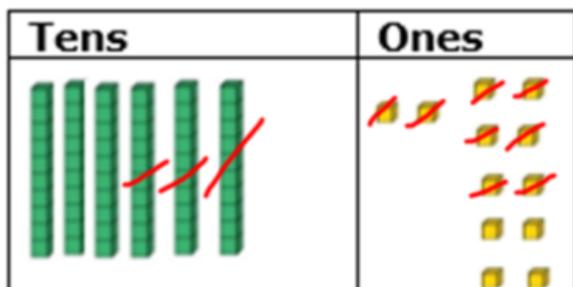
	T	O
	7	4
-	2	3
	5	1

Year 3

Subtract numbers with up to three digits using a formal written method (two-digit number subtract a two-digit number with one exchange)

$$62 - 28 =$$

Estimate: $60 - 20 = 40$



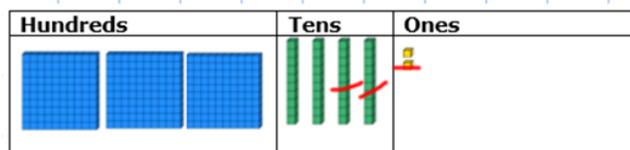
	T	O
	5	6 2
-	2	8
	3	4

Year 3

Subtract numbers with up to three digits using a formal written method (three-digit number subtract a two-digit number with no exchange)

$$342 - 21 =$$

Estimate: $340 - 20 = 320$

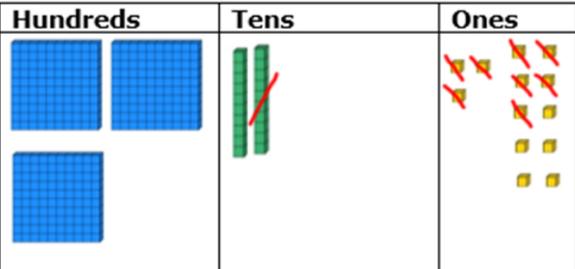


	H	T	O
	3	4	2
-	0	2	1
	3	2	1

Subtract numbers with up to three digits using a formal written method (three-digit number subtract a two-digit number with one exchange)

$$328 - 18 = 310$$

$$\text{Estimate: } 320 - 20 = 300$$

Hundreds	Tens	Ones
		

H T O
$\begin{array}{r} 3 \cancel{2} 8 \\ - 0 1 8 \\ \hline 3 1 0 \end{array}$

Any gaps should be filled with a place holder (a zero).

When children show good confidence with one exchange, include more than one exchange.

Children should be exposed to a variety of questions that involve numbers made up of a different number of digits (up to 3 digits) and it should be reinforced that subtraction **cannot** be done in any order, unlike addition.

$$342 - 242 =$$

$$\underline{\quad} = 342 - 242$$

$$432 - 39 =$$

$$\underline{\quad} = 432 - 39$$

$$932 - 9 =$$

$$\underline{\quad} = 932 - 9$$

Subtract with up to four-digit numbers using a formal written methods using column subtraction (three-digit number subtract a two-digit number with one exchange)

From Year 3 onwards, children should be actively encouraged to make an estimate before calculating.

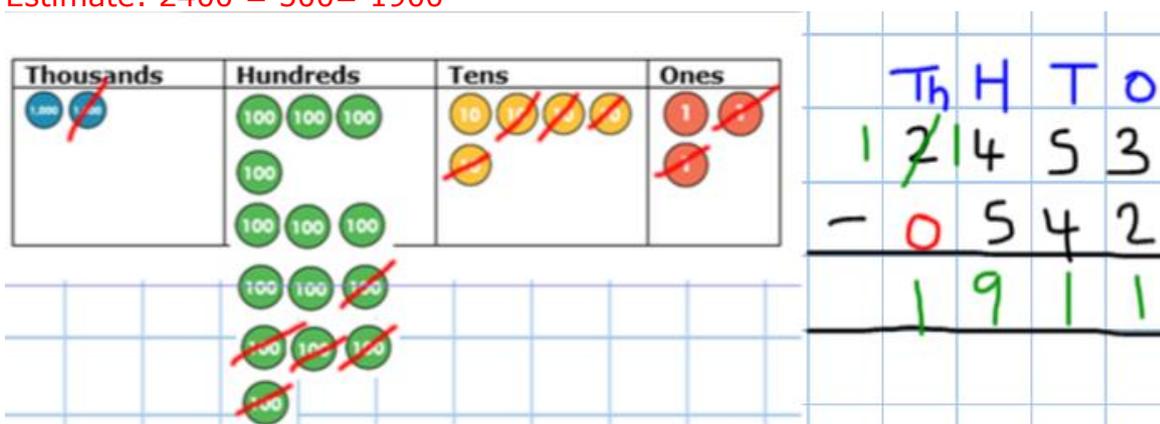
Estimate

Calculate

Check

$$2453 - 542 =$$

Estimate: $2400 - 500 = 1900$



The diagram illustrates the subtraction process using base ten blocks and a column subtraction grid. On the left, base ten blocks represent 2453: two thousands (blue), four hundreds (green), five tens (yellow), and three ones (red). To subtract 542, one hundred is exchanged for ten tens, and one ten is exchanged for ten ones. The remaining blocks are: one thousand, three hundreds, four tens, and thirteen ones. On the right, a column subtraction grid shows the calculation:

	Th	H	T	O
	2	4	5	3
-	0	5	4	2
	1	9	1	1

 The grid shows the borrowing process: a 1 is written in the thousands column, and a 2 is written in the hundreds column. The final result is 1911.

Year 4

Any gaps should be filled with a place holder (0)

Children should be exposed to a variety of questions that involve numbers made up of a different number of digits (up to 4 digits) and it should be reinforced that subtraction cannot be done in any order.

As children's confidence increases, more exchanges should be added in.

$$6332 - 4634 =$$

$$\underline{\quad\quad\quad} = 6332 - 4634$$

$$7532 - 353 =$$

$$\underline{\quad\quad\quad} = 7532 - 353$$

$$4353 - 64 =$$

$$\underline{\quad\quad\quad} = 4353 - 64$$

Solve problems involving numbers with up to three decimal places

From Year 3 onwards, children should be actively encouraged to make an estimate before calculating.

Estimate

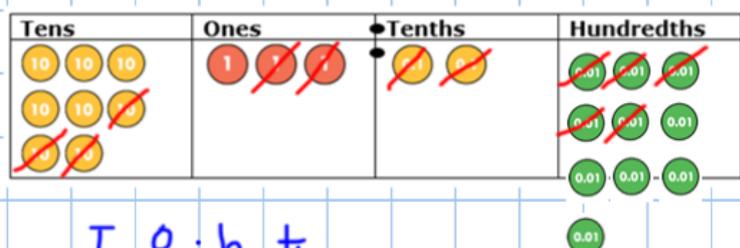
Calculate

Check

*Estimates should be more accurate from Year 5 onwards as the children should be confidently using their rounding skills.

$$83.2 - 32.15 =$$

$$\text{Estimate: } 80 - 30 = 50$$



T	O	.	T	H
8	3	.	2	0
-	3	.	1	5
<hr/>				
5	1	.	0	5

An emphasis needs to be placed on lining to decimal points up. This will help to get the digits in the correct place value columns. Also, the decimal point should sit on the line and not be given a column of its own.

When the children can confidently explain the process of exchanging, the visual representation can be removed.

Foundation Stage:

Mathematics

Number ELG

Children at the expected level of development will:

- Have a deep understanding of number to 10, including the composition of each number;
- Subitise (recognise quantities without counting) up to 5;
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.

Year 1

Statutory requirements

Pupils should be taught to:

- read, write and interpret mathematical statements involving addition (+), subtraction (−) and equals (=) signs
- represent and use number bonds and related subtraction facts within 20
- add and subtract one-digit and two-digit numbers to 20, including zero
- solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$.

Year 2

Statutory requirements

Pupils should be taught to:

- solve problems with addition and subtraction:
 - using concrete objects and pictorial representations, including those involving numbers, quantities and measures
 - applying their increasing knowledge of mental and written methods
- recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
- add and subtract numbers using concrete objects, pictorial representations, and mentally, including:
 - a two-digit number and ones
 - a two-digit number and tens
 - two two-digit numbers
 - adding three one-digit numbers
- show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot
- recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.

Year 3:

Statutory requirements

Pupils should be taught to:

- add and subtract numbers mentally, including:
 - a three-digit number and ones
 - a three-digit number and tens
 - a three-digit number and hundreds
- add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction
- estimate the answer to a calculation and use inverse operations to check answers
- solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.

Year 4:

Statutory requirements

Pupils should be taught to:

- add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate
- estimate and use inverse operations to check answers to a calculation
- solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.

Year 5:

Statutory requirements

Pupils should be taught to:

- add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)
- add and subtract numbers mentally with increasingly large numbers
- use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy
- solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

- solve problems involving number up to three decimal places

Year 6

Statutory requirements

Pupils should be taught to:

- multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
- divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context
- 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
- perform mental calculations, including with mixed operations and large numbers
- identify common factors, common multiples and prime numbers
- use their knowledge of the order of operations to carry out calculations involving the four operations
- solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why