

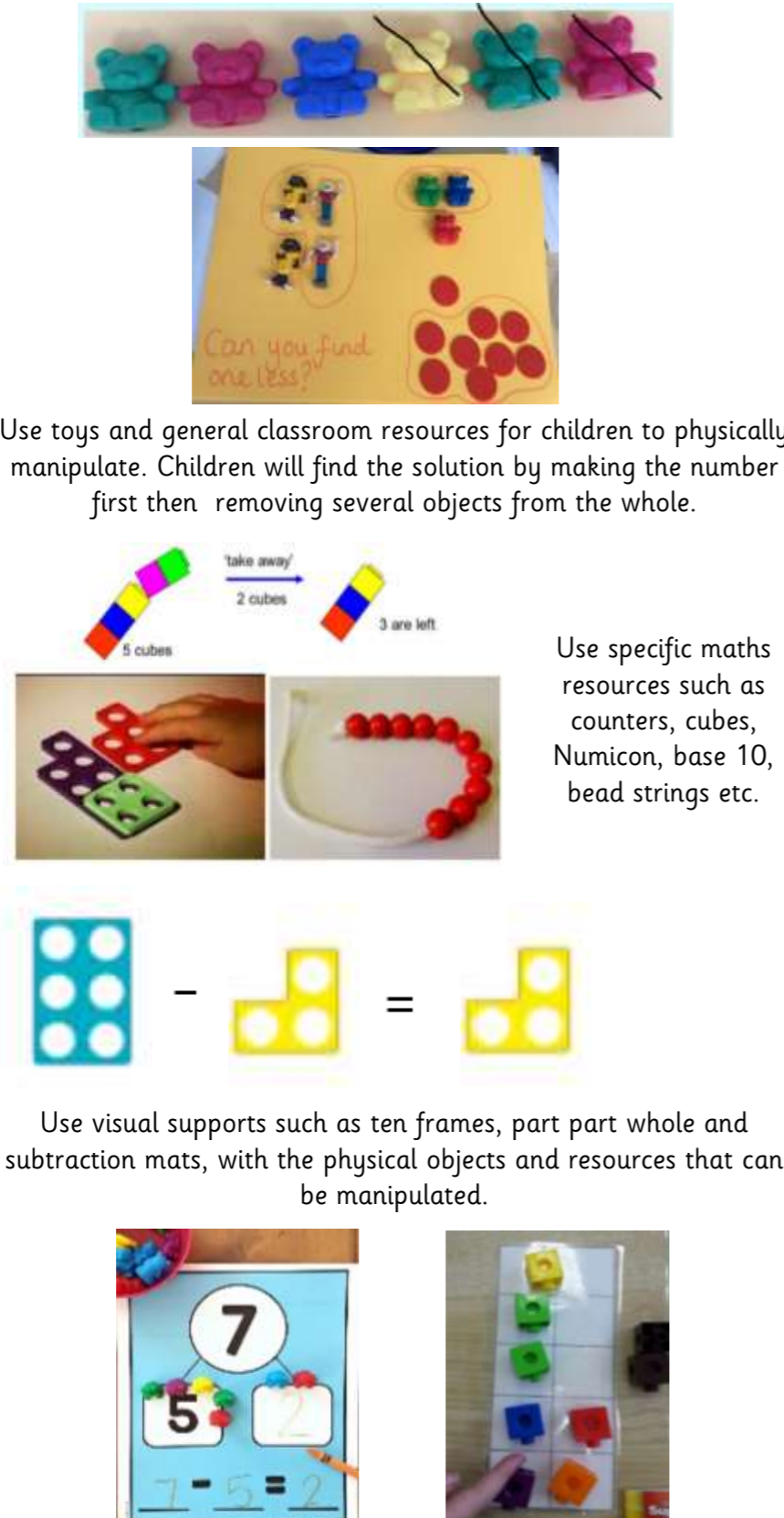
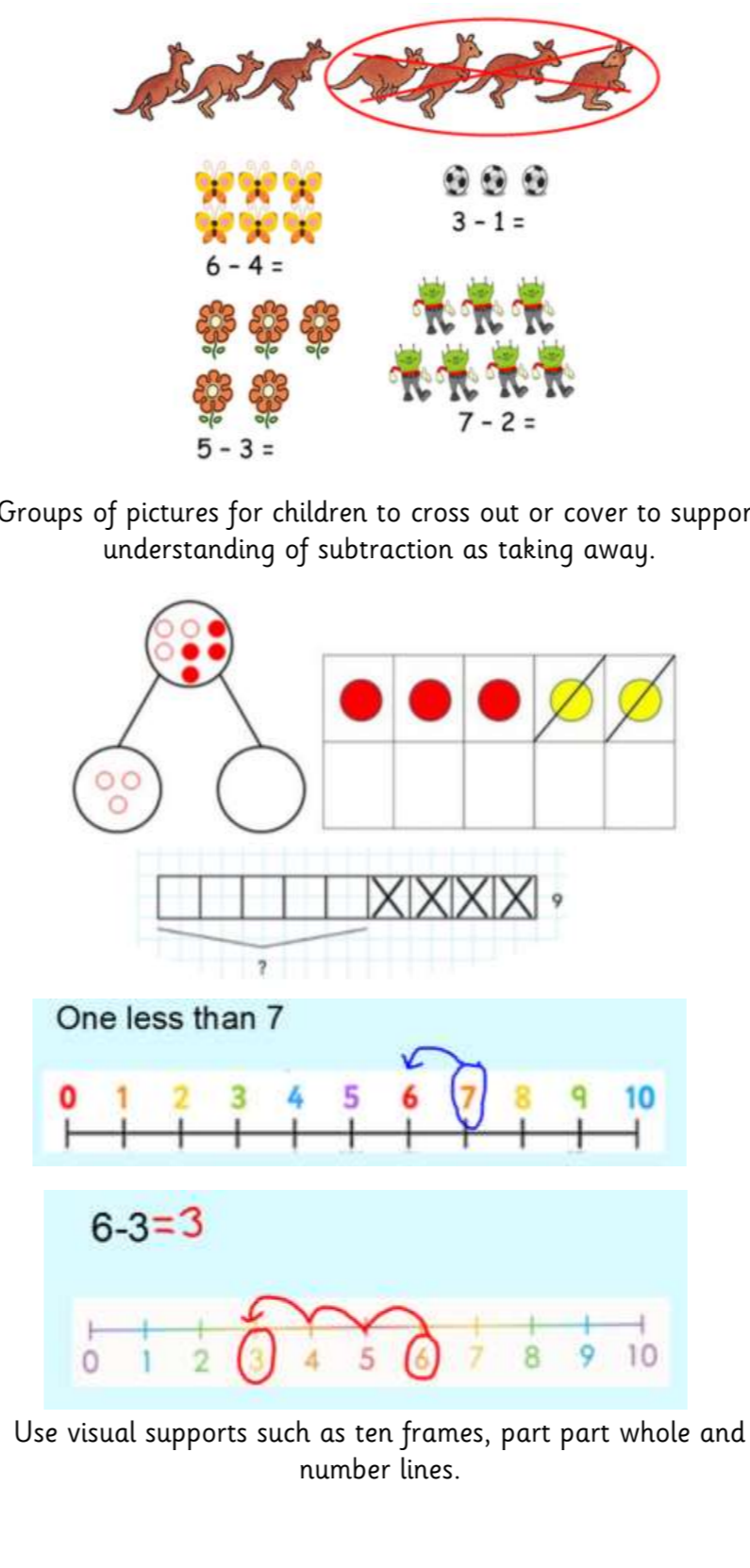


Deeping St James Community Primary Calculation Policy – Subtraction



EYFS

Key Vocabulary: take away, difference between, how many are left/ left over? How many are gone? one less, ... less, How many fewer is...than...? How much less is...? difference.

| Objective & Strategy | Concrete | Pictorial | Abstract |
|---|--|--|--|
| <p>- Knows that a group of things change in quantity when something is taken away</p> <p>- Find one less from a group of five objects, then ten objects.</p> <p>- In practical activities and discussion, beginning to use the vocabulary involved in subtracting.</p> <p>- Using quantities and objects, they subtract two single digit numbers and count back to find the answer.</p> |  <p>Use toys and general classroom resources for children to physically manipulate. Children will find the solution by making the number first then removing several objects from the whole.</p> <p>Use specific maths resources such as counters, cubes, Numicon, base 10, bead strings etc.</p> <p>Use visual supports such as ten frames, part part whole and subtraction mats, with the physical objects and resources that can be manipulated.</p> |  <p>Groups of pictures for children to cross out or cover to support understanding of subtraction as taking away.</p> <p>Use visual supports such as ten frames, part part whole and number lines.</p> | <p>A focus on symbols and numbers to form a calculation.</p> <p>$7 - 1 = 6$</p> <p>$6 - 3 = 3$</p> |





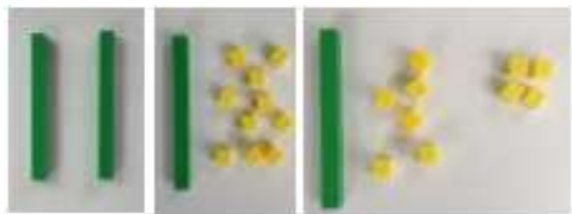

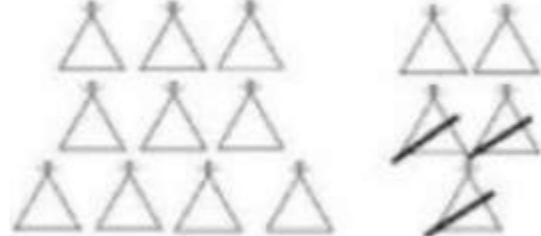
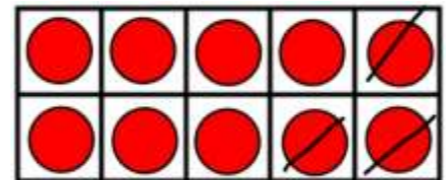
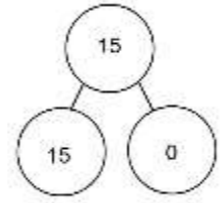
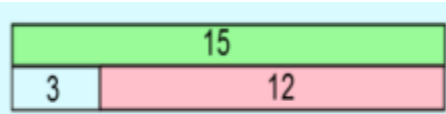


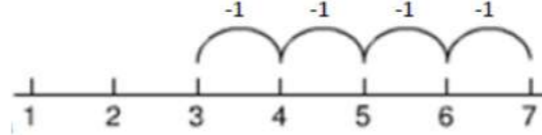


Deeping St James Community Primary Calculation Policy – Subtraction



Year 1

Key Vocabulary: take away, difference between, how many are left/ left over? How many are gone? one less, ... less, How many fewer is...than...? How much less is...? difference, equal to, minus, subtract, leaves, difference, how many more, most, least, count back

| Objective & Strategy | Concrete | Pictorial | Abstract |
|---|--|---|--|
| <p>-Subtract one-digit and two-digit numbers to 20, including 0.</p> <p>Taking away ones</p> | <p>Use concrete apparatus (counters, bead strings, cubes, numicon, base 10) and other physical objects to find the solution by removing several objects from the whole – taking away.</p> <p>$6 - 3 = 3$</p>   <p>$15 - 3 = 12$</p>  <p>$15 - 0 = 15$</p>  <p>$20 - 4 = 16$</p>  <p>Exchange one ten for 10 ones and then subtract the smaller number.</p> | <p>Children represent pictorially by drawing objects/ tens frames and crossing out to show what has been taken away.</p> <p>$4 - 2 = 2$</p>  <p>$15 - 3 = 12$</p>  <p>$10 - 3 = 7$</p>  <p>Use part whole models and bar models to represent the subtractions – pictorially or with numbers.</p>   | <p>Record as a written calculation.</p> <p>$6 - 3 = 3$</p> <p>$15 - 3 = 12$</p> <p>$15 - 12 = 3$</p> <p>$10 - 3 = 7$</p> <p>$10 - 7 = 3$</p> |
| <p>-Subtract one-digit and two-digit numbers to 20, including 0.</p> <p>Counting Back</p> | <p>Use concrete apparatus (counters, bead strings, cubes) and other physical objects to find the solution by counting back from the larger number.</p> <p>$13 - 4 = 9$</p>  <p>Make the larger number in the subtraction. Move the beads along the string as you count backwards in ones.</p>  <p>Use counters to make the larger number in the subtraction. Move them away from the group as you count backwards in ones.</p> | <p>Use pictorial representations of number lines, number tracks or 100 squares. Start at the bigger number and count back the smaller number showing the jumps on the number line.</p>  <p>$7 - 4 = 3$</p> | <p>Understand subtraction verbally.</p> <p><i>Put 15 in your head, count back 3, what number are you at?</i></p> <p>Record as a written calculation.</p> <p>$13 - 4 = 9$</p> <p>$15 - 3 = 12$</p> |



Deeping St James Community Primary Calculation Policy – Subtraction



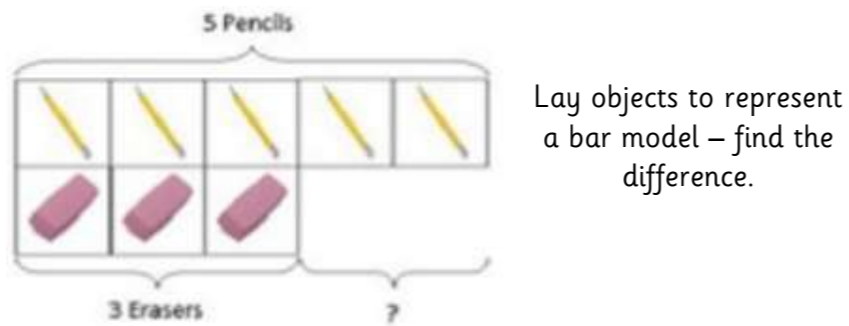
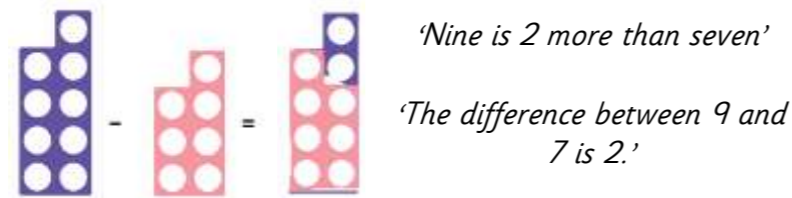
-Subtract one-digit and two-digit numbers to 20, including 0.

Find the difference

Use concrete apparatus (numicon, cubes, counters) and physical objects to compare amounts to find the difference.

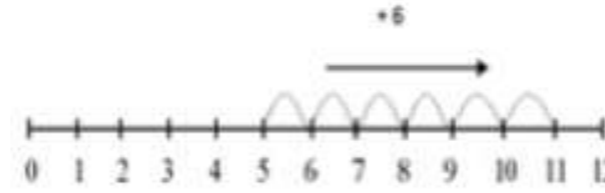


What is the difference between 9 and 7?



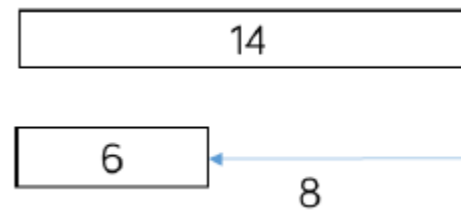
Number line – counting on to find the difference:
Find the difference by counting on from the smaller number to the bigger number.

$11 - 5 = 6$



Draw bars to find the difference between 2 numbers

$14 - 6 = 8$



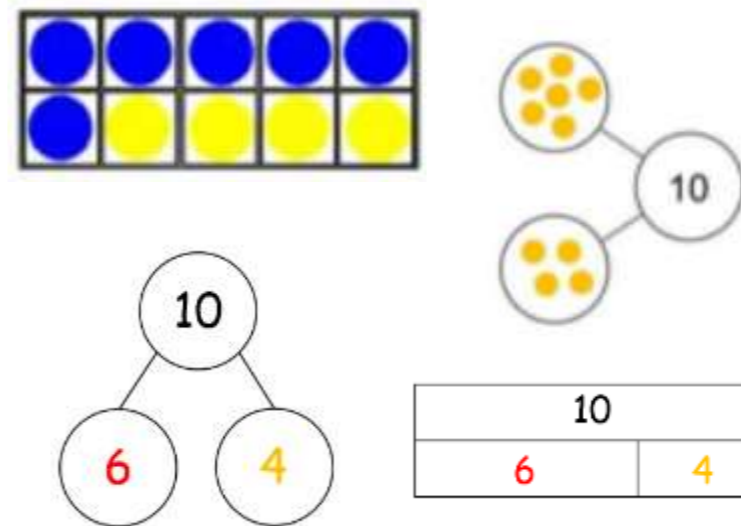
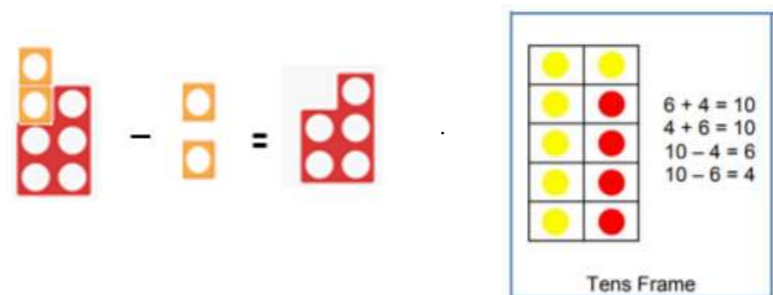
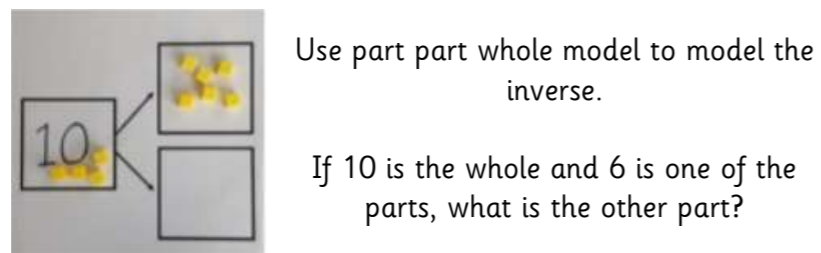
Children apply to word problems.

Hannah has 12 sweets and her sister has 5 sweets. How many more sweets does Hannah have than her sister?

$12 - 5 = 7$

-Represent and use number bonds and related subtraction facts within 20.

Use of real objects, counters, cubes, numicon and bead strings. (Link to addition)



Use pictorial representations to show related number facts.

Understand as a written calculation.

$$\begin{aligned} 6 + 4 &= 10 \\ 4 + 6 &= 10 \\ 10 - 6 &= 4 \\ 10 - 4 &= 6 \end{aligned}$$

Emphasis should be on the language:

'1 less than 6 is equal to 5'
'2 less than 7 is 5'
'5 is 3 less than 8'

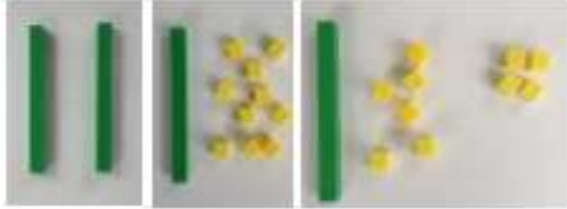
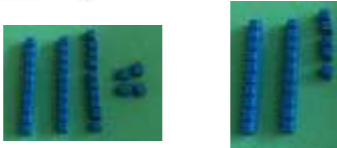
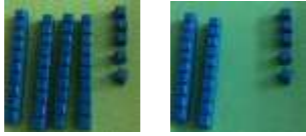

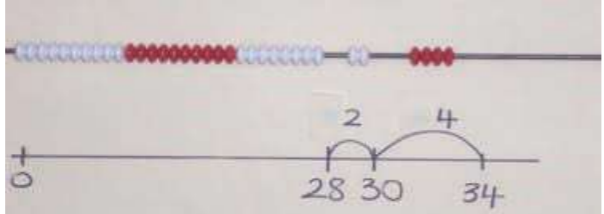
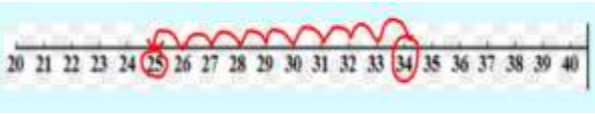


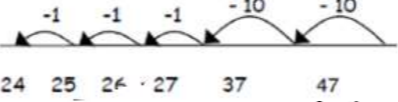
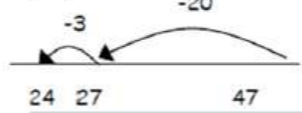
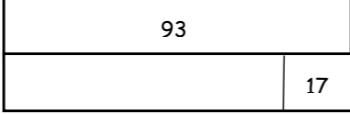
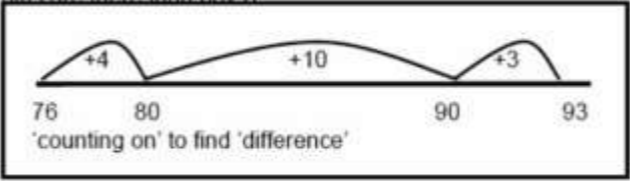
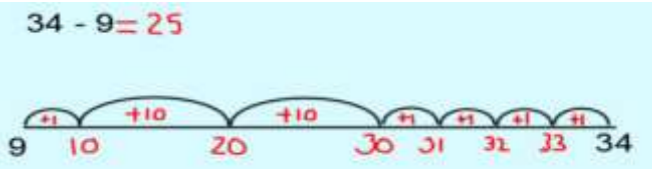


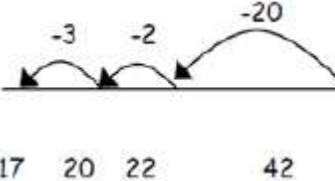


Deeping St James Community Primary Calculation Policy – Subtraction



Year 2

Key Vocabulary: take away, difference between, how many are left/ left over? How many are gone? one less, ... less, How many fewer is...than...? How much less is...? difference, equal to, minus, subtract, leaves, difference, how many more, most, least, count back, **count on**, **strategy**, **partition**, **tens**, **ones**, **inverse**

| Objective & Strategy | Concrete | Pictorial | Abstract |
|---|--|---|--|
| <p>-To subtract numbers using objects, pictures and mentally including:</p> <p>*a 2-digit number and ones</p> <p>*a 2-digit number and tens</p> <p>*two 2-digit numbers</p> | <p>Use concrete apparatus base 10/ place value counters to represent the numbers in the calculation then use the knowledge of exchanging tens for ten ones in order to subtract.</p> <p>$20 - 4 = 16$</p>  <p>$34 - 9 = 25$</p>  <p>$45 - 20 = 25$</p>  <p>$93 - 76 = 17$</p>  <p>Bead strings can be used to show counting on to find the difference.</p> <p>$34 - 28 = 4$</p>  | <p>Use pictorial representations on a number line or a hundred square. Count back from the largest number to the smallest number to find the difference.</p> <p>$34 - 9 = 25$</p>  <p>$45 - 20 = 25$</p>  <p>$93 - 76 = 17$</p>  <p>$47 - 23 = 24$</p>  <p>progress to more efficient jumps:</p>  <p>Modelled using a bar model – understanding ‘difference’</p>  <p>$93 - 76 = 17$</p>  | <p>Record as a written method using number lines. Use both the count on and count back methods ensuring that the children understand that they are finding the difference between the numbers.</p> <p>Count on:</p> <p>$34 - 9 = 25$</p>  <p>$45 - 20 = 25$</p>  <p>$93 - 76 = 17$</p>  <p>Count back: (Also see pictorial)</p>  |




Deeping St James Community Primary Calculation Policy – Subtraction




-To derive and use related facts up to 100.

Use concrete apparatus (base 10/place value counters, cubes) to show mathematical facts up to 100.

$10 - 3 = 7$




$100 - 30 = 70$

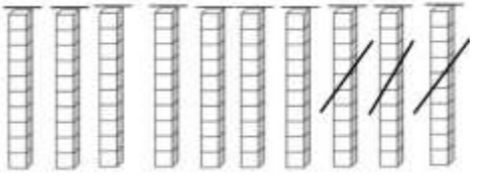


Use pictorial representations to show mathematical related facts. Children show their thinking using jottings to record their mathematical calculations.

$10 - 3 = 7$



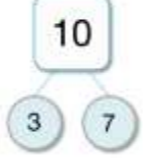
$100 - 30 = 70$



Bar models and part whole representations:

| | |
|----|---|
| 10 | |
| 3 | 7 |

| | |
|-----|----|
| 100 | |
| 30 | 70 |



Record as a written calculation

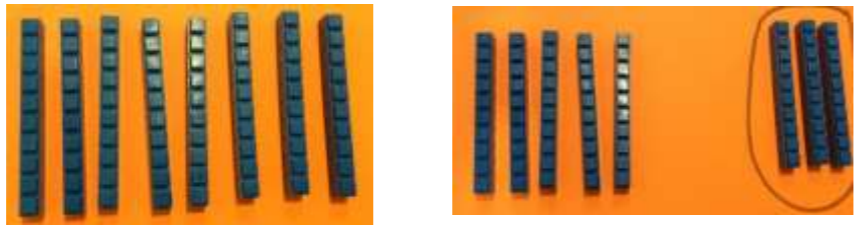
$10 - 7 = 3$
leads to...

$100 - 70 = 30$

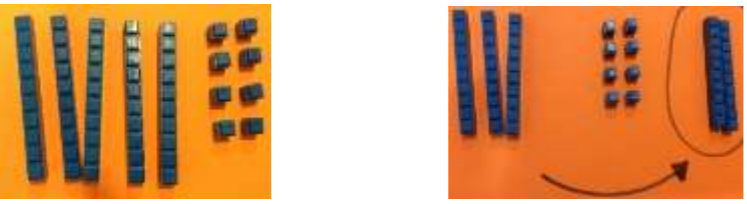
-To subtract tens from a 2-digit number.

Use concrete apparatus (base 10/ place value counters) to subtract tens from a 2-digit number.

$80 - 30 = 50$

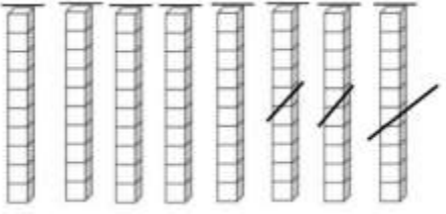


$58 - 20 = 38$

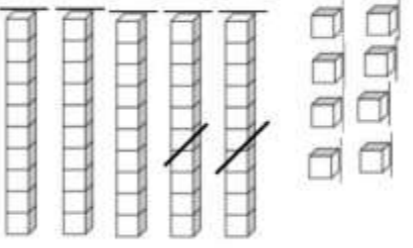


Use/ model pictorial representations (base 10/place value counters) crossing out the tens that are being subtracted.

$80 - 30 = 50$



$58 - 20 = 38$



Record as a written calculation

$80 - 30 = 50$

$58 - 20 = 38$

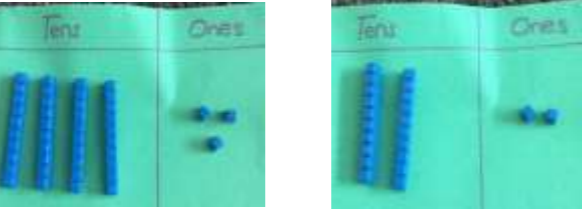
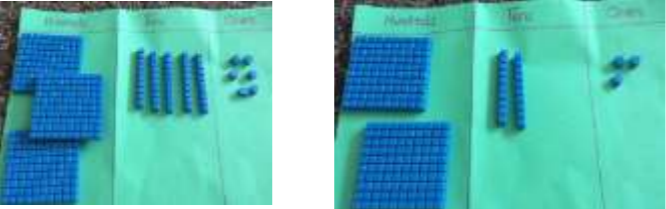

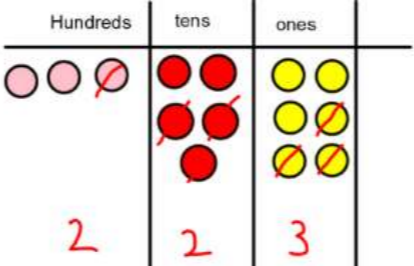
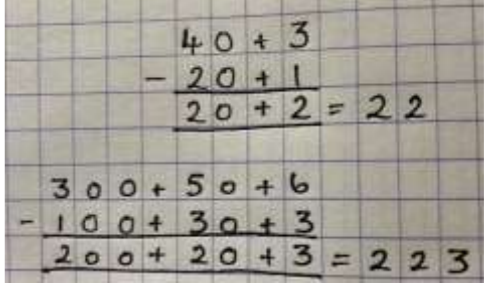
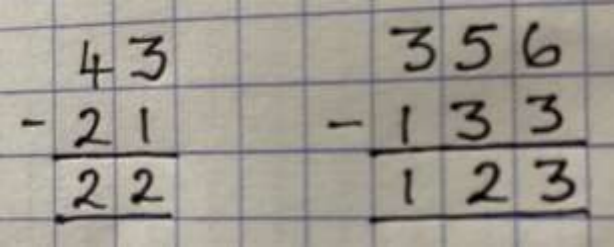
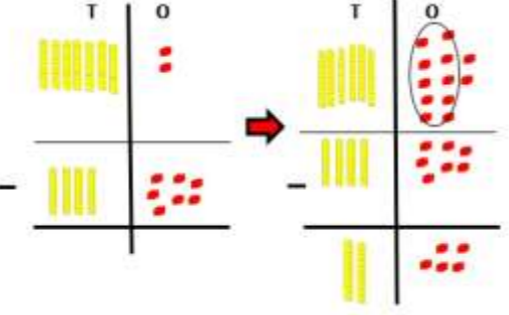

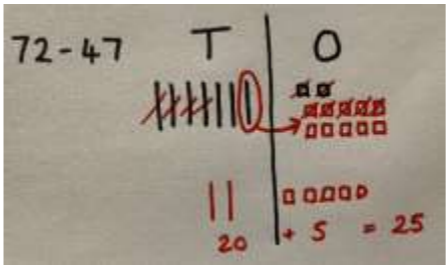
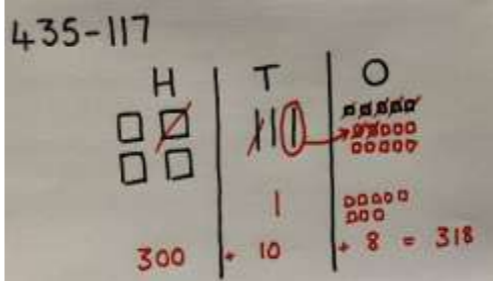
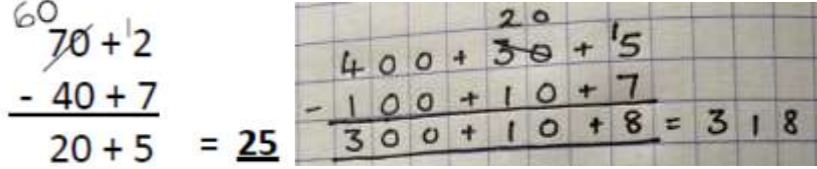
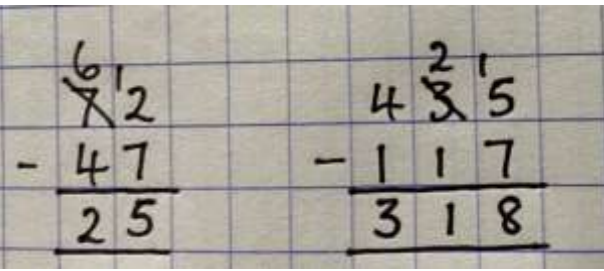


Deeping St James Community Primary Calculation Policy – Subtraction



Year 3

Key Vocabulary: take away, difference between, how many are left/ left over? How many are gone? one less, ... less, How many fewer is...than...? How much less is...? difference, equal to, minus, subtract, leaves, difference, how many more, most, least, count back, count on, strategy, partition, tens, ones, inverse, **exchange, decrease, hundreds, value, digit**

| Objective & Strategy | Concrete | Pictorial | Abstract |
|---|---|--|--|
| <p>- To subtract 2- and 3-digit numbers without exchange.</p> | <p>Use concrete apparatus (base 10/place value counters) to make the biggest number then take away the ones, tens and then hundreds to find the difference.</p> <p>$43 - 21 = 22$</p>  <p>$356 - 133 = 223$</p>  | <p>Use pictorial representations using base 10/place value counters – crossing off in order from ones to hundreds to find how many are left.</p> <p>$43 - 21 = 22$</p>  <p>$356 - 133 = 223$</p>  | <p>Written method: Partitioned column subtraction:</p>  <p>Progressing to Formal column subtraction:</p>  |
| <p>- To subtract 2- and 3-digit numbers with exchange.</p> | <p>Use concrete apparatus (base 10/place value counters) to subtract numbers up to 3 digits. Make the number then regroup by exchanging a ten for ten ones and a hundred for ten tens where necessary so that the number can be subtracted.</p> <p>$72 - 47 = 25$</p>  <p>Step 1: Make the numbers. Step 2: Exchange 1 ten for 10 ones. Step 3: Subtract two tens and 9 ones.</p> <p>$435 - 117 = 318$</p>  <p>Step 1: Make the number. Step 2: Exchange 1 ten for 10 ones. Step 3: Subtract 7 ones, 1 ten and 1 hundred.</p> | <p>Use pictorial representations of base 10/ place value counters to show the regrouping in order to find the difference.</p> <p>$72 - 47 = 25$</p>  <p>$435 - 117 = 318$</p>  | <p>Written method: Continue to use Partitioned column subtraction until secure:</p>  <p>Progressing to Formal column subtraction:</p>  |



Deeping St James Community Primary Calculation Policy – Subtraction

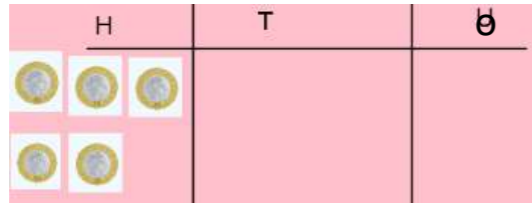


-To subtract amounts of money to give change.

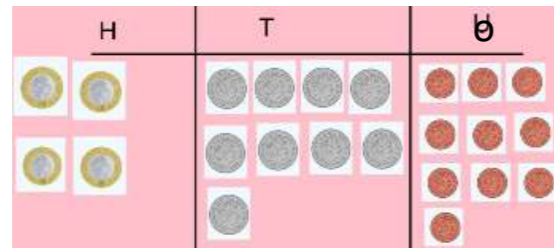
Use base money to make the number then regroup by exchanging a ten for ten ones and a hundred for ten tens where necessary so that you can subtract to find the difference.

$$£5 - £2.72 = £2.28 \text{ or } 228\text{p}$$

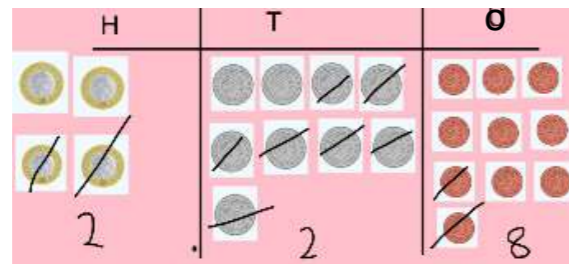
Step 1: Make the Number



Step 2: Exchange

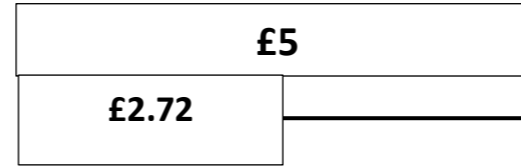


Step 3: Subtract to solve



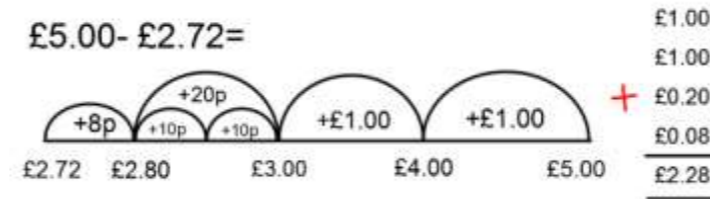
Children draw pictorial representations to show the regrouping in order to find how many are left, this can be in the form of a number line.

Modelled using bar model



Modelled using a number line.

Children start with the smallest number and add to the nearest tenth, then nearest 1, until you reach the biggest number. Children will then need to add the jumps to calculate the change.

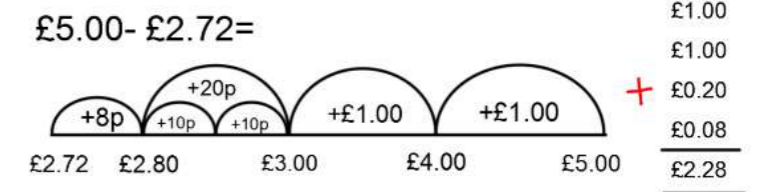


Formal written method:

Children complete subtractions involving decimals which are presented in word problem format. They use zeros for place holders and know that decimal points should line up under each other.

I go to the shop with £5.00

I spend £2.72 - how much change do I get?



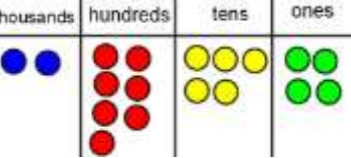
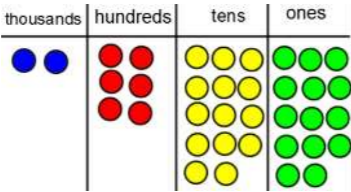
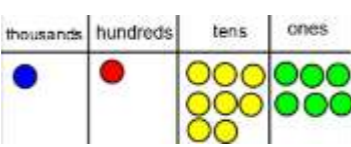
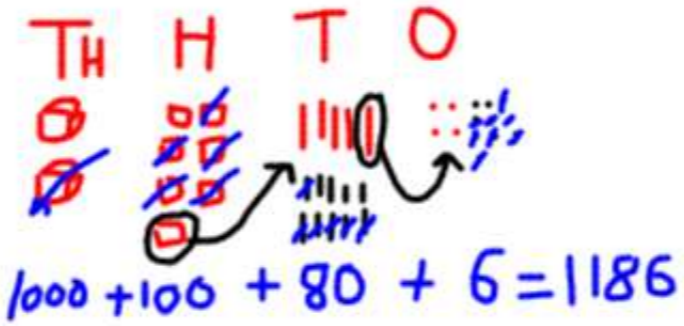
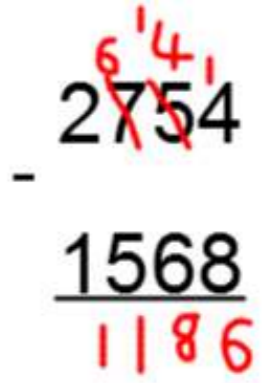
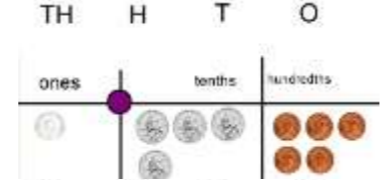
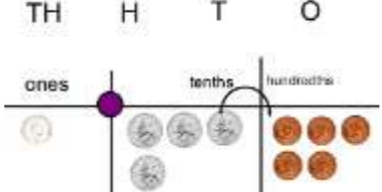
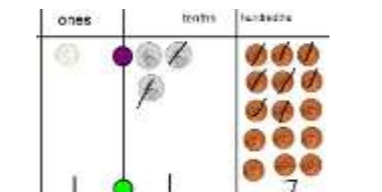
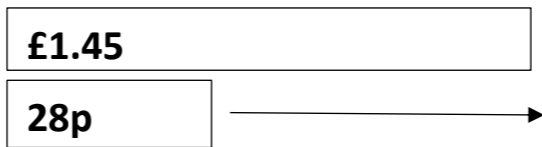
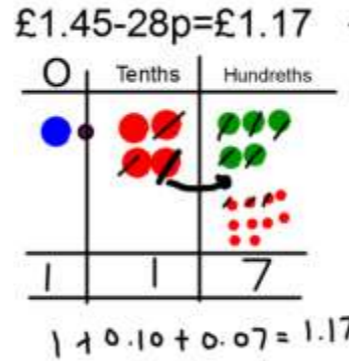
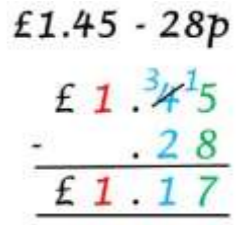


Deeping St James Community Primary Calculation Policy – Subtraction



Year 4

Key Vocabulary: take away, difference between, how many are left/ left over? How many are gone? one less, ... less, How many fewer is...than...? How much less is...? difference, equal to, minus, subtract, leaves, difference, how many more, most, least, count back, count on, strategy, partition, tens, ones, inverse, exchange, decrease, hundreds, value, digit, **thousands**

| Objective & Strategy | Concrete | Pictorial | Abstract |
|---|---|--|---|
| <p>Pupils should be using formal written methods of column subtraction where appropriate.</p> <p>-To subtract numbers with up to 4 digits using a formal written method.</p> | <p>Use concrete apparatus (base 10/place value counters) to subtract numbers up to 4 digits. Make the number then regroup by exchanging a ten for ten ones and a hundred for ten tens and a thousand for ten hundreds where necessary so that the number can be subtracted.</p> <p>Children begin to understand multi exchange where exchange is needed in more than one column.</p> <p>2754-1568=1186</p>  <p>Step 1: Make the number.</p>  <p>Step 2: Exchange 1 ten for 10 ones and 1 hundred for 10 tens.</p>  <p>Step 3: Subtract 8 ones, 6 tens, 5 hundreds and 1 thousand.</p> | <p>Use pictorial representations to subtract numbers up to 4 digits.</p> <p>Children draw pictorial representations to show the regrouping in order to find the difference.</p> <p>2754 – 1568 = 1186</p>  | <p>Record as a written calculation</p> <p>Use formal column subtraction, including examples with multiples exchanges.</p> <p>2754 – 1568 = 1186</p>  <p>Use formal method with further calculations such as: 4032 - 1764 with zeros as place holders.</p> |
| <p>-To solve simple measure and money problems up to two decimal places.</p> <p>-To subtract amounts of money to give change- progression from Y3.</p> | <p>Use the place value counters to make the number then regroup by exchanging, where necessary: a thousand for ten hundreds, a hundred for ten tens, a ten for ten ones, a one for ten tenths and ten tenths for a hundredth so that you can subtract.</p> <p>£1.45 - 28p = £1.17</p> <p>Step 1: Make the number</p>  <p>Step 2: Exchange *because you can't subtract 8 from 5. Children will need to exchange 10p for 10x1p.</p>  <p>Step 3: Subtract to solve</p>  | <p>Use pictorial representations to show the regrouping in order to find the difference.</p> <p>Model using bar model to visualise the calculation.</p>  <p>£1.45 - 28p = £1.17</p>  | <p>Formal written method</p> <p>Children complete subtractions involving decimals which are presented in word problem format. They use zeros for place holders and know that decimal points should line up under each other.</p> <p>Bella spends 28p in the shop. She has £1.45 pocket money. How much change will she receive?</p>  <p>Calculating change from £5 - use number line method – see Year 3.</p> |

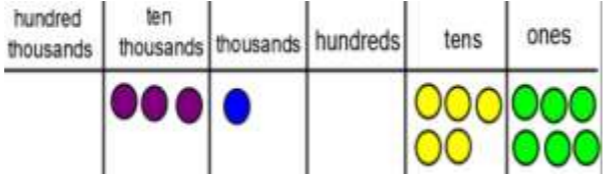
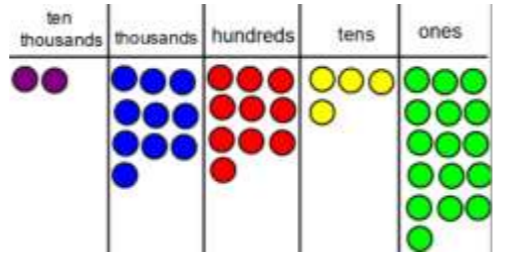
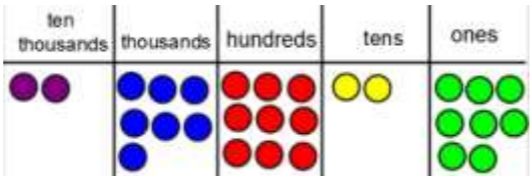
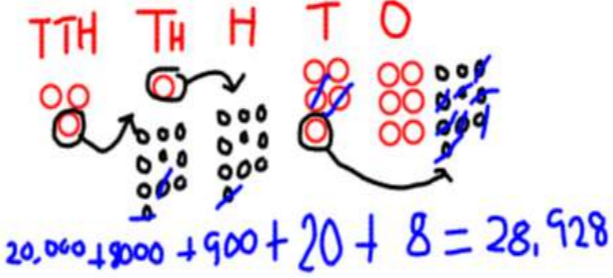
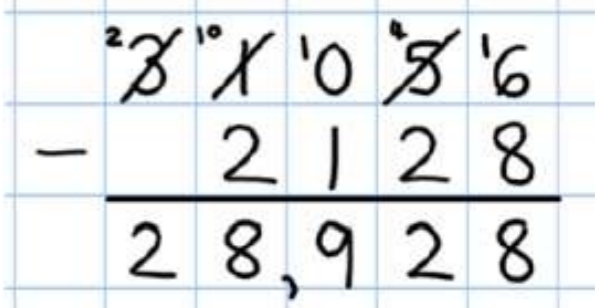
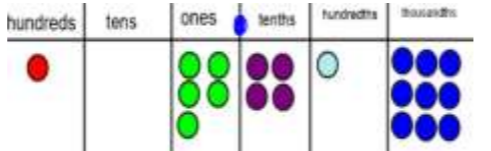
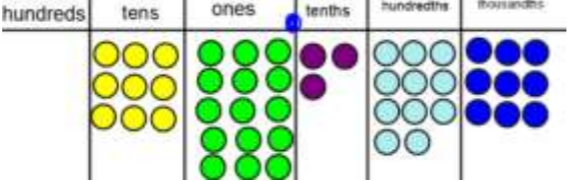
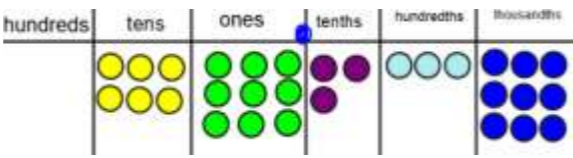
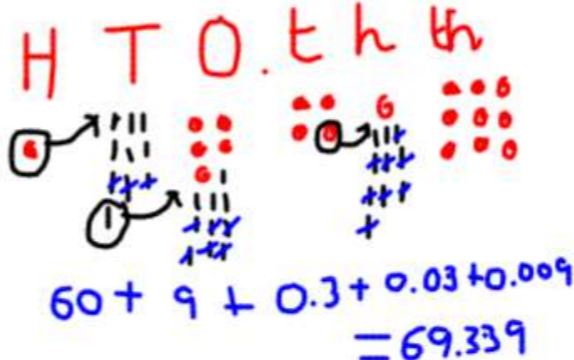
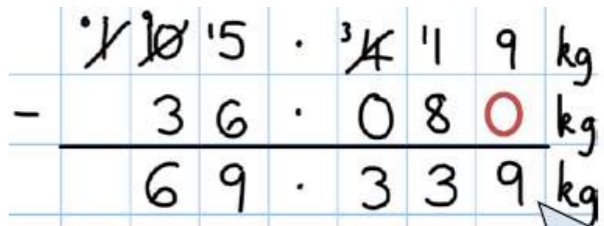


Deeping St James Community Primary Calculation Policy – Subtraction



Years 5 & 6

Key Vocabulary: take away, difference between, how many are left/ left over? How many are gone? one less, ... less, How many fewer is...than...? How much less is...? difference, equal to, minus, subtract, leaves, difference, how many more, most, least, count back, count on, strategy, partition, tens, ones, inverse, exchange, decrease, hundreds, value, digit, thousands, integer, tenths, hundredths, decimal point, decimal

| Objective & Strategy | Concrete | Pictorial | Abstract |
|---|--|--|--|
| <p>At this stage pupils should be encouraged to work in the abstract using the formal column method to subtract larger numbers efficiently.</p> <p>-To subtract numbers with at least 4 digits. (Y5) -To subtract numbers with increasingly large and complex numbers. (Y6)</p> | <p>Use the place value counters to make the number, then regroup by exchanging, where necessary.</p> <p>31056 – 2128 = 28 928</p> <p>Step 1: Make the number</p>  <p>Step 2: Exchange</p>  <p>Step 3: Subtract</p>  | <p>If required children draw pictorial representations to show the regrouping in order to find the difference.</p> <p>31056 – 2128 = 28 928</p>  | <p>(Children can have abstract supported by a pictorial or concrete if required.)</p> <p>Record as a written calculation</p> <p>Formal column subtraction.</p> <p>Children to solve calculation including those with a different number of digits.</p>  |
| <p>-To solve problems involving measure using decimal notation up to three decimal places. (Y5) -To subtract with increasingly large and more complex numbers and decimal values (up to 3dp). (Y6) -To solve problems involving the conversion of units of measure, using decimal notation up to 3 decimal places. (Y6)</p> | <p>Use the place value counters to make the number then regroup by exchanging, where necessary.</p> <p>105.419 kg - 36080g</p> <p>As this is a mixed measure problem, children would first convert so they are working with the same unit.</p> <p>105.419kg – 36.080kg</p> <p>Step one: Make the number.</p>  <p>Step 2: Exchange.</p>  <p>Step 3: Subtract to solve.</p>  | <p>If required children draw pictorial representations to show the regrouping in order to find the difference.</p> <p>105.419kg – 36.080kg</p>  | <p>(Children can have abstract supported by a pictorial or concrete if required.)</p> <p>Record as a written calculation</p> <p>Formal column subtraction.</p> <p>Children complete subtractions involving decimals which are presented in word problem format. They use zeros for place holders and know that decimal points should line up under each other. They convert measures so that they are working with the same unit.</p> <p>105.419 kg - 36080g would convert into 105.419kg – 36.080kg</p>  |