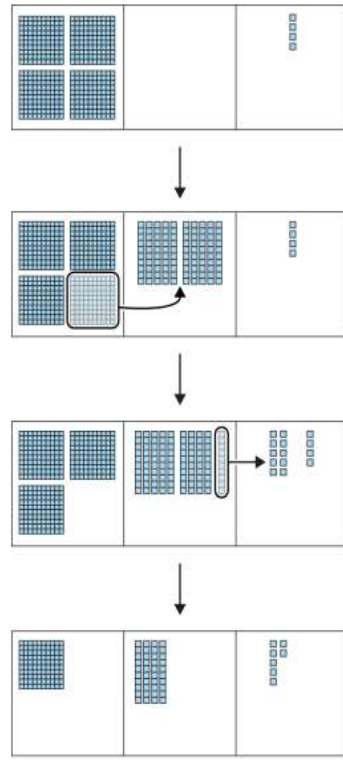


## Year 3 Subtraction

|        | Mental Strategies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Concrete       | Pictorial | Abstract     | Vocabulary | Models, Images and resources |   |   |   |   |              |  |  |   |   |              |                                                                                                                                                                                                                         |                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |   |   |  |   |   |   |   |   |  |   |   |  |  |   |   |  |  |                |   |   |  |   |   |  |  |   |   |                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                   |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------|--------------|------------|------------------------------|---|---|---|---|--------------|--|--|---|---|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---|---|--|---|---|---|---|---|--|---|---|--|--|---|---|--|--|----------------|---|---|--|---|---|--|--|---|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Year 3 | <p>Recall number bonds to 20 and links to bonds of multiples of 10 to 100 , complements to 100 e.g. <math>100 - 55 = 45</math></p> <p>Practise solving varied subtraction questions mentally with two-digit numbers, the answers could exceed 100</p> <p>Subtract numbers mentally, including:</p> <p>a three-digit number and ones</p> <p>a three-digit number and tens</p> <p>a three-digit number and hundreds</p> <p>groups of small numbers, e.g. <math>9 - 3 - 2</math></p> <p>a two-digit number from a multiple of 10, eg. <math>50 - 38</math>, <math>90 - 27</math>, <math>68 - 35</math></p> <p>Children know the vocabulary below:<br/>Minuend minus subtrahend equals the difference</p> <div><table><tr><td></td><td>£</td><td>5</td><td>8</td><td>← minuend</td></tr><tr><td>-</td><td>£</td><td>1</td><td>3</td><td>← subtrahend</td></tr><tr><td></td><td></td><td>4</td><td>5</td><td>← difference</td></tr></table></div> |                | £         | 5            | 8          | ← minuend                    | - | £ | 1 | 3 | ← subtrahend |  |  | 4 | 5 | ← difference | <p><u>Subtracting a 2-digit from a 2-digit number not crossing the tens</u></p> <p>Please see Y2 examples</p> <p><u>Subtracting a 2-digit from a 2-digit number crossing the tens</u></p> <p>Please see Y2 examples</p> | <p><u>Subtracting a 2-digit from a 2-digit number not crossing the tens</u></p> <p>Please see Y2 examples</p> <p><u>Subtracting a 2-digit from a 2-digit number crossing the tens</u></p> <p>Please see Y2 examples</p> | <p><u>Subtracting a 2-digit from a 2-digit number not crossing the tens</u></p> <p>Please see Y2 examples</p> <div><table><tr><td></td><td>T</td><td>O</td></tr><tr><td></td><td>8</td><td>7</td></tr><tr><td>-</td><td>3</td><td>4</td></tr><tr><td></td><td>5</td><td>3</td></tr></table></div> <p>Can now move to formal column methods</p> <p><u>Subtracting a 2-digit from a 2-digit number crossing the tens</u></p> <p>Please see Y2</p> <div><table><tr><td></td><td></td><td>T</td><td>O</td></tr><tr><td></td><td></td><td><del>7</del>8</td><td>2</td></tr><tr><td>-</td><td></td><td>2</td><td>4</td></tr><tr><td></td><td></td><td>5</td><td>8</td></tr></table></div> <p>Can now move to formal column methods examples</p> |  | T | O |  | 8 | 7 | - | 3 | 4 |  | 5 | 3 |  |  | T | O |  |  | <del>7</del> 8 | 2 | - |  | 2 | 4 |  |  | 5 | 8 | <p>Subtraction</p> <p>Partition into hundreds, tens and ones</p> <p>Empty number line</p> <p>Count on</p> <p>Carry back</p> <p>First Then Now</p> <p>Empty number line</p> <p>Subtrahend</p> <p>Minuend</p> <p>Difference</p> | <p>100 square</p> <p>Number lines</p> <p>Number tracks</p> <p>Bead strings ( for children )</p> <p>Bead bar</p> <p>Tens Frame</p> <p>Numicon</p> <p>Place Value Disks</p> <p>Cuisenaire</p> <p>Base hundreds tens and ones</p> <p>Arrow Cards</p> |
|        | £                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 5              | 8         | ← minuend    |            |                              |   |   |   |   |              |  |  |   |   |              |                                                                                                                                                                                                                         |                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |   |   |  |   |   |   |   |   |  |   |   |  |  |   |   |  |  |                |   |   |  |   |   |  |  |   |   |                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                   |
| -      | £                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1              | 3         | ← subtrahend |            |                              |   |   |   |   |              |  |  |   |   |              |                                                                                                                                                                                                                         |                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |   |   |  |   |   |   |   |   |  |   |   |  |  |   |   |  |  |                |   |   |  |   |   |  |  |   |   |                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                   |
|        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 4              | 5         | ← difference |            |                              |   |   |   |   |              |  |  |   |   |              |                                                                                                                                                                                                                         |                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |   |   |  |   |   |   |   |   |  |   |   |  |  |   |   |  |  |                |   |   |  |   |   |  |  |   |   |                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                   |
|        | T                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | O              |           |              |            |                              |   |   |   |   |              |  |  |   |   |              |                                                                                                                                                                                                                         |                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |   |   |  |   |   |   |   |   |  |   |   |  |  |   |   |  |  |                |   |   |  |   |   |  |  |   |   |                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                   |
|        | 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 7              |           |              |            |                              |   |   |   |   |              |  |  |   |   |              |                                                                                                                                                                                                                         |                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |   |   |  |   |   |   |   |   |  |   |   |  |  |   |   |  |  |                |   |   |  |   |   |  |  |   |   |                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                   |
| -      | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 4              |           |              |            |                              |   |   |   |   |              |  |  |   |   |              |                                                                                                                                                                                                                         |                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |   |   |  |   |   |   |   |   |  |   |   |  |  |   |   |  |  |                |   |   |  |   |   |  |  |   |   |                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                   |
|        | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 3              |           |              |            |                              |   |   |   |   |              |  |  |   |   |              |                                                                                                                                                                                                                         |                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |   |   |  |   |   |   |   |   |  |   |   |  |  |   |   |  |  |                |   |   |  |   |   |  |  |   |   |                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                   |
|        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | T              | O         |              |            |                              |   |   |   |   |              |  |  |   |   |              |                                                                                                                                                                                                                         |                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |   |   |  |   |   |   |   |   |  |   |   |  |  |   |   |  |  |                |   |   |  |   |   |  |  |   |   |                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                   |
|        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <del>7</del> 8 | 2         |              |            |                              |   |   |   |   |              |  |  |   |   |              |                                                                                                                                                                                                                         |                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |   |   |  |   |   |   |   |   |  |   |   |  |  |   |   |  |  |                |   |   |  |   |   |  |  |   |   |                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                   |
| -      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2              | 4         |              |            |                              |   |   |   |   |              |  |  |   |   |              |                                                                                                                                                                                                                         |                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |   |   |  |   |   |   |   |   |  |   |   |  |  |   |   |  |  |                |   |   |  |   |   |  |  |   |   |                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                   |
|        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 5              | 8         |              |            |                              |   |   |   |   |              |  |  |   |   |              |                                                                                                                                                                                                                         |                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |   |   |  |   |   |   |   |   |  |   |   |  |  |   |   |  |  |                |   |   |  |   |   |  |  |   |   |                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                   |

### Subtracting 3 digit numbers crossing tens and hundreds

Use base 10 or counters.  
Here is an example with base ten.



### Subtracting money - no decimals

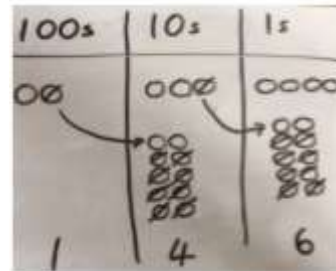
Tommy has £5 and 75p in his pocket.



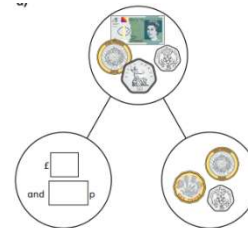
He puts £2 and 50p in his money box.  
How much is left in his pocket?

### Subtracting 3 digit numbers crossing tens and hundreds

Represent the place value counters pictorially; remembering to show what has been exchanged.



### Subtracting money - no decimals



### Subtracting 3 digit numbers crossing tens and hundreds

Use formal written methods where exchange is also required.

| 100s | 10s | 1s |
|------|-----|----|
| 4    | 0   | 4  |
| -    | 2   | 5  |
|      |     | 7  |
|      |     |    |
|      |     |    |

| 100s                      | 10s | 1s |
|---------------------------|-----|----|
| <del>4</del> <sup>3</sup> | 10  | 4  |
| -                         | 2   | 5  |
|                           |     | 7  |
|                           |     |    |
|                           |     |    |

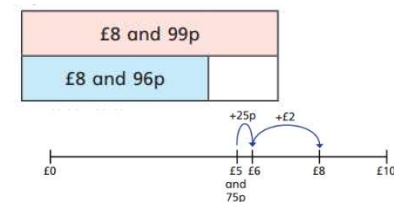
| 100s                      | 10s                       | 1s |
|---------------------------|---------------------------|----|
| <del>4</del> <sup>3</sup> | <del>0</del> <sup>9</sup> | 14 |
| -                         | 2                         | 5  |
|                           |                           | 7  |
|                           |                           |    |
|                           |                           |    |

| 100s                      | 10s                       | 1s |
|---------------------------|---------------------------|----|
| <del>4</del> <sup>3</sup> | <del>0</del> <sup>9</sup> | 14 |
| -                         | 2                         | 5  |
|                           |                           | 7  |
| 1                         | 4                         | 7  |

### Subtracting money - no decimals

Formal part whole and counting backwards on a numberline also.



Find the difference

Decrease by

Solve problems, including missing number problems, using number facts, place value, and more complex subtraction

Subtract with up to three digits, using the efficient written methods of columnar subtraction.

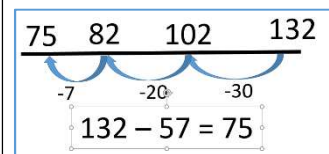
Use understanding of place value and partitioning

Estimate answers calculations and use inverse operations to check

Children will continue to use empty number lines with increasingly large numbers.

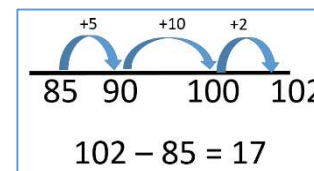
Count back from the largest number

132- 75



Count on or find the difference

102-89



Missing-addend problems

Type of problem: missing part

Rewrite the addition equation as a subtraction equation, for example:

$$329 + \square = 743 \rightarrow 743 - 329 = \square$$

Language focus

"There is a missing part. To find the missing part, we subtract the other part from the whole."

Missing-subtrahend problems

Type of problem: missing part

Rewrite the subtraction equation by swapping the subtrahend and the difference, for example:

$$477 - \square = 285 \rightarrow 477 - 285 = \square$$

Language focus

"There is a missing part. To find the missing part, we subtract the other part from the whole."

Useful IWB links for manipulatives

<https://www.coolmath4kids.com/manipulatives/base-ten-blocks>

<https://mathsbot.com/manipulatives/placeValueCounters>

<https://mathsbot.com/manipulatives/bar>

<https://classroomsecrets.co.uk/free-year-1-part-whole-model-iwb-addition-and-subtraction-activity/>

<https://www.nctm.org/Classroom-Resources/Illuminations/Interactives/Ten-Frame/>

<http://www.ictgames.com/mobilePage/tenFrame/index.html>

