Progression in written calculation strategies for subtraction

(Examples indicate end of year expectations)

Adapted from Learning Exchange materials

Year 1

Statutory Guidance

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

Solve one-step problems that involve subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □ – 9.

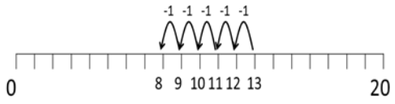
Possible representations

Using concrete objects

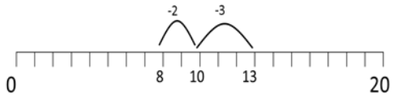
e.g. 13 – 5 =

Using pictorial representations

13 – 5 =



Subtracting using more efficient jumps



Year 2

Statutory Guidance

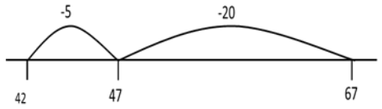
Subtract numbers using concrete objects, pictorial representations, and mentally, including:

- a two-digit number and ones
- a two-digit number and tens
- two two-digit numbers
- adding three one-digit numbers

Possible representations

e.g. 67 – 25 =

2 digit subtract 2 digit using efficient place value jumps



Non-statutory guidance

suggests expanded decomposition with no exchanges

```
  90   8      98
- 50   4      54
  40   4  =   44
```

Year 3

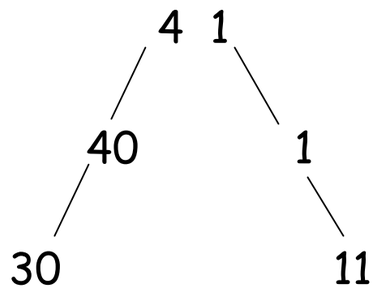
Statutory Guidance

Subtract numbers with up to three digits, using formal written methods of columnar subtraction

e.g. 417 - 324 =

```
  3 1
  4 1 7
- 3 2 4
    9 3
```

Using partitioning



Year 4

Statutory Guidance

Subtract numbers with up to 4 digits using the formal written methods of columnar subtraction where appropriate

e.g. 8417 – 3908 =

```
  7  1  0  1
  8  4  1  7
- 3  9  0  8
-------------
  4  5  0  9
```

Non-statutory guidance

Linked to money and measures (2 decimal places).

```
  5  1
  6  7 . 7 5
- 2  8 . 5 0
-------------
  3  9 . 2 5
```

Year 5

Statutory Guidance

Subtract whole numbers with more than 4 digits, including using formal written methods (columnar subtraction)

e.g. 12407 – 9614 =

```
  0  1  1  3     1
  1  2  4  0  7
- 9  6  1  4
-------------
  2  7  9  3
```

Measurement

Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.

```
  8     1  3  1
  9  .  4  2
- 6  .  7  8
-------------
  2  .  6  4
```

Year 6

Statutory Guidance

Solve subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

Measurement

Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.