

## Pencil and paper procedures (subtraction)

As outcomes, Year 5 pupils should, for example:

### Informal written methods

Use pencil and paper methods to support, record or explain calculations, achieving consistent accuracy. Discuss, explain and compare methods.

Where calculations are set out in columns, know that units should line up under units, and so on...

*HTU – HTU, then ThHTU – ThHTU*

For example:

A: counting up

leading to

$$\begin{array}{r} 754 \\ - 286 \\ \hline 14 \text{ to make } 300 \\ 400 \text{ to make } 700 \\ \hline 54 \text{ to make } 754 \\ \hline 468 \end{array} \qquad \begin{array}{r} 754 \\ - 286 \\ \hline 14 \text{ (300)} \\ \hline 454 \text{ (754)} \\ \hline 468 \end{array}$$

B: compensation (take too much, add back)

$$\begin{array}{r} 754 \\ - 286 \\ \hline 454 \text{ (754 - 300)} \\ +14 \text{ (since } 300 - 286 = 14) \\ \hline 468 \end{array}$$

### Standard written methods

Continue to develop an efficient standard method that can be applied generally. For example:

C: decomposition

$$\begin{array}{r} 754 = 700 + 50 + 4 \\ - 286 = 200 + 80 + 6 \end{array} \qquad \begin{array}{r} \text{leading to} \\ 744 \\ - 286 \\ \hline 458 \end{array}$$

$$\begin{array}{r} = 700 + 40 + 14 \\ \hline 200 + 80 + 6 \\ \hline 468 \end{array} \qquad \begin{array}{r} 744 \\ - 286 \\ \hline 458 \end{array}$$

$$\begin{array}{r} = 600 + 140 + 14 \\ \hline 200 + 80 + 6 \\ \hline 400 + 60 + 8 \end{array} \qquad \begin{array}{r} 644 \\ - 286 \\ \hline 358 \end{array} \qquad \begin{array}{r} 61414 \\ - 286 \\ \hline 61128 \end{array}$$

Subtract numbers with different numbers of digits. For example, find the difference between:

764 and 5821, 4567 and 893.

### Extend to decimals

Using the chosen method, find the difference between two decimal fractions with up to three digits and the same number of decimal places. Know that decimal points should line up under each other. For example:

£9.42 – £6.78  
72.5 km – 4.6 km

As outcomes, Year 6 pupils should, for example:

### Informal written methods

Use pencil and paper methods to support, record or explain calculations, achieving consistent accuracy. Discuss, explain and compare methods.

Where calculations are set out in columns, know that units should line up under units, and so on...

*ThHTU – ThHTU, then with any number of digits*

For example:

A: counting up (complementary addition)

$$\begin{array}{r} 6467 \\ - 2684 \\ \hline 16 \text{ (2700)} \\ 300 \text{ (3000)} \\ \hline 3467 \text{ (6467)} \\ 3000 \\ \hline 700 \\ 70 \\ \hline 13 \\ \hline 3783 \end{array} \qquad \text{or} \qquad \begin{array}{r} 6467 \\ - 2684 \\ \hline 16 \text{ (2700)} \\ 300 \text{ (3000)} \\ \hline 3467 \text{ (6467)} \\ 3783 \end{array}$$

B: compensation (take too much, add back)

$$\begin{array}{r} 6467 \\ - 2684 \\ \hline 3467 \text{ (6467 - 3000)} \\ +316 \text{ (since } 3000 - 2684 = 316) \\ \hline 3783 \end{array}$$

### Standard written methods

Continue to develop an efficient standard method that can be applied generally. For example:

C: decomposition

$$\begin{array}{r} 51316 \\ 6467 \\ - 2684 \\ \hline 3783 \end{array}$$

Subtract numbers with different numbers of digits. For example, find the difference between:

782 175 and 4387.

### Extend to decimals

Using the chosen method, subtract two or more decimal fractions with up to three digits and either one or two decimal places. Know that decimal points should line up under each other. For example:

324.9 – 7.25  
14.24 – 8.7