

Maths: Addition and Subtraction using whole numbers with more than four digits

Mental

Connected knowledge Y4:

- Add/subtract a 4-digit number and 1s
 - within 10s and 100s
 - across 10s and 100s
- Add/subtract a 4-digit number
 - *within 10s and 100s*
 - *across 10s and 100s*
- Add/subtract a 4-digit number and 100s

New knowledge Y5:

- Number bonds to 1,000
 - using multiples of 10 and 100
 - number bonds within other numbers
- Add/subtract a 4 digit and 1 digit number
 - without bridging
 - with bridging
- Add/subtract a 4 digit number and multiple of ten
 - without bridging
 - with bridging
- Add/subtract a 4 digit number and of a hundred
 - without bridging
 - with bridging
- Add/subtract a 4 digit number and of a thousand
 - without bridging
 - with bridging
- The compensation and adjustment method
 - add/subtract too much then adjust
 - add/subtract too little then adjust
- Near doubles
 - add/subtract near double and adjust
- Estimate answers by rounding first

Written

Connected knowledge Y4:

1. Add and subtract numbers with up to 4-digits using column method:

- add two 4-digit numbers regrouping once
- add two 4-digit numbers regrouping more than once
- subtract two 4-digit numbers exchanging once
- subtract two 4-digit numbers exchanging more than once

2. Estimate the answers:

- find the nearest multiple of 100 or 1,000 using a number line

3. Inverse operations:

- find the inverse relationship using the part-whole model
- find the inverse relationship using the bar model
- how to use the inverse to check answers to calculations

New knowledge Y5:

1. Add/subtract whole numbers with more than four digits:

- use the formal column method
 - line the digits appropriately
- exchange or regroup more than one digit
- add/subtract from multiples of 1,000 and 10,000

2. Rounding is used to check calculations and determine the level of accuracy

3. Inverse operations

- to calculate missing numbers
- to calculate missing digits

4. Strategies to solve multi-step problems

- identify key parts of the question and calculation required
- move between mental and written methods knowing which is the most efficient
- know the required order of calculations