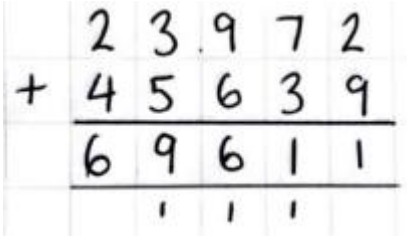
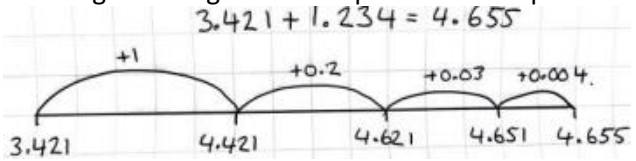
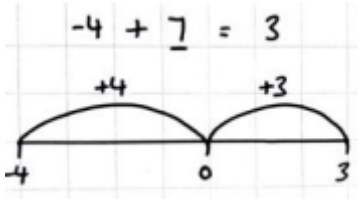
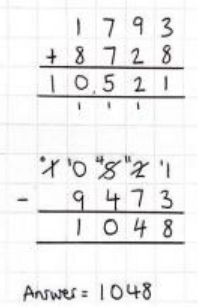
Addition – Year 6

Selected National Curriculum Programme of Study Statements Pupils should be taught to:	**The Big Ideas (NCETM)**
• solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why • use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy • • use negative numbers in context, and calculate intervals across zero	Deciding which calculation method to use is supported by being able to take apart and combine numbers in many ways. For example, calculating 8·78 + 5·26 might involve calculating 8·75 + 5·25 and then adjusting the answer. The associative rule helps when adding three or more numbers: 367 + 275 + 525 is probably best thought of as 367 + (275 + 525) rather than (367 + 275) + 525

Stage 1	Stage 2	End of year expectation
Column addition with numbers with more than 4-digits. Ensure number sentences chosen would not be more suited to an efficient strategy.  Adding involving numbers up to 3 decimal places. 	Adding negative numbers in context. Here are the temperatures in four cities at midnight and at midd Temperature City / At midnight / At midday Paris / −4°C / −2°C Oslo / −13°C / −7°C Rome / 3°C / 10°C Warsaw / −6°C / 2°C At **midnight**, how many degrees colder was Paris than Rome? 	Multistep problem in context, deciding which methods to use and why. (Provide a mixture of opportunities to apply mental and formal strategies taught) At the start of June, there were 1,793 toy cars in the shop. During June, • 8,728 more toy cars were delivered • 9,473 toy cars were sold. How many toy cars were left in the shop at the end of June? 

Subtraction – Year 6

Selected National Curriculum Programme of Study Statements Pupils should be taught to:

- solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
- use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
- use negative numbers in context, and calculate intervals across zero

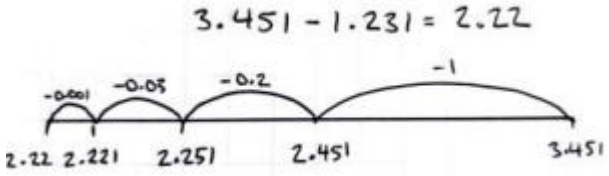
The Big Ideas (NCTEM)

Deciding which calculation method to use is supported by being able to take apart and combine numbers in many ways. For example, calculating 8·78 + 5·26 might involve calculating 8·75 + 5·25 and then adjusting the answer. The associative rule helps when adding three or more numbers: 367 + 275 + 525 is probably best thought of as 367 + (275 + 525) rather than (367 + 275) + 525

Stage 1

Column subtraction with number with more than 4-digits. Ensure number sentences chosen would not be more suited to a more efficient mental strategy.

Subtracting involving numbers up to 3 decimal places.



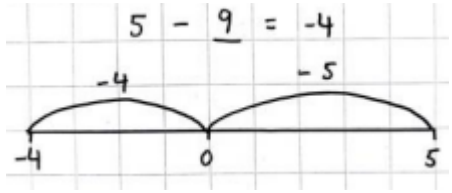
Stage 2

Subtracting with negative numbers in context.

This table shows the temperature at 9 am on three days in January.

1st January	8th January	15th January
+5°C	–4°C	+1°C

What is the difference between the temperature on 1st January and the temperature on 8th January?



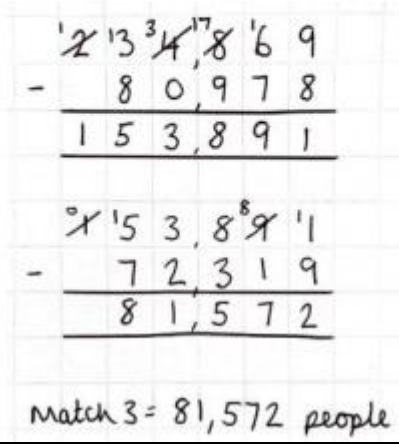
End of year expectation

Multistep problem in context, deciding which methods to use and why. (Provide a mixture of opportunity to apply mental and formal strategies taught)

One Saturday afternoon, a total of 234,869 people attended three rugby matches.

- 80,978 people attended match 1
- 72,319 people attended match 2

How many people attended match 3?



HIAS Progression in Calculation