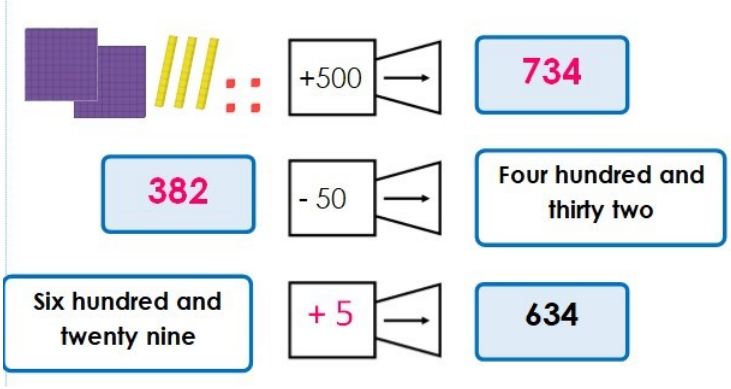
DEEPENING UNDERSTANDING ANSWER SHEET

YEAR 3/4 – PATTERN SPOTTING

Fluency 1



Fluency 2

The children recognise what is the same and what is different to spot the patterns to solve these quickly. Each time, you need to add/subtract 4 to the ones/tens/hundreds number.

232 + 4 = 236	478 - 4 = 474
232 + 40 = 272	478 - 40 = 438
232 + 400 = 632	478 - 400 = 78

Fluency 3

The children could suggest lots of addition and subtraction facts that use 14 – 6 = 8. They could be encouraged to show these as a part-part whole or a bar model to observe the relationships and demonstrate their understanding of adding and subtracting ones, tens and hundreds to a number.

Fluency 4

All of the calculations can be worked out using the given fact.

Reasoning 1

There is a pattern. Something is happening. Some things are the same, some things are different.

The children may be drawn to the things that are the same. One of the parts is always 136. The other part is different but there is a pattern. It gets ten times bigger each time. The whole is getting bigger each time.

The children could work out the wholes for each bar model, (141, 186, 636). They might notice that the ones number is the same in the last two bar models because one of the numbers they are adding has no ones.

Reasoning 2

Modelled DAB Reasoning Response

D – Anita is partly correct

A – If we did not have the zero in 1057 – we would not know there were zero tens. The zero is a place holder and we must include it.

B – However if the answer is a two digit number, less than 1000, where there are no hundreds, it is not necessary to write the zero. For example we write eighty six like this 86 – not like this 086. The zero is not necessary.

Reasoning 3

Modelled DAB Reasoning Response

D – The children may suggest 493 + 10 or 403 - 10.

A – Both of these involve crossing the hundreds which make them harder.

B – The other two do not involve crossing the hundreds so are easier.

Download our 'DAB' posters to support reasoning in your classroom:

https://www.deepeningunderstanding.co.uk/product/dab-reasoning-posters/

Problem Solving 1

The butterfly is growing by 10 cm each week. They should easily be able to add on 10 cm to 23 cm to work out that the butterfly will be 33 cm in week 4. To work out its size in week 10, they could continue the pattern, perhaps on a table or they could look at the relationship between the number of the week and the size of the butterfly. The tens number is always one less than the number of the week and the ones number is always 3. So in week 10, the butterfly will be 93 cm.

The giraffe is growing by 100 cm each week. They should easily be able to add on 100 cm to 302 cm to work out that the giraffe will be 402 cm in week 4. To work out its size in week 10, they could continue the pattern, perhaps on a table or they could look at the relationship between the number of the week and the size of the butterfly. This time, the tens number is always the same as the number of the week and the ones number is always 2. So in week 10, the butterfly will be 1002 cm.