



## DEEPENING UNDERSTANDING ANSWER SHEET

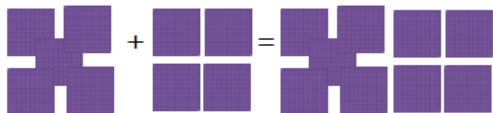
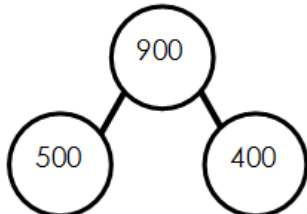
### YEAR 3 PIM – ADD AND SUBTRACT MULTIPLES OF 100

#### Fluency 1

Four hundreds add three hundreds equals seven hundreds.

Seven hundreds subtract four hundreds equals three hundreds.

#### Fluency 2

<p><b>Draw it</b></p> 	<p><b>Write in words</b></p> <p>Five hundreds add four hundreds equals nine hundreds.</p>
<p><b>Part-whole diagram</b></p> 	<p><b>Number sentence</b></p> <p><math>500 + 400 = 900</math> or <math>400 + 500 = 900</math></p>

#### Fluency 3

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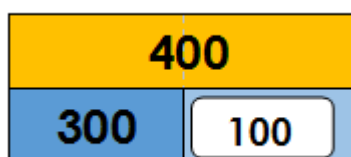
## Reasoning 1

### Modelled DAB Reasoning Responses

**D** – Alfie has made a mistake

**A** – The missing number is not 700.

**B** – Alfie has added the numbers together instead of subtracting. On a bar model, the top part represents the total. So the calculation should be  $400 - 300 = 100$ . So the missing number should be 100.



## Reasoning 2

### Modelled DAB Reasoning Response

**D** – False

**A** – When you add a multiple of 100 to a number it is not always just the hundreds column that changes.

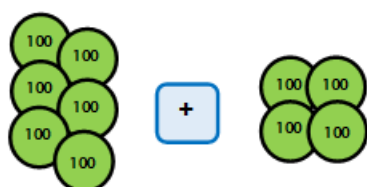
**B** – Usually it is only the hundreds column that changes. The tens and ones always stay the same. When you get past 900, the next multiple of 100 will be 1000 so the hundreds and thousands column will change.

## Reasoning 3

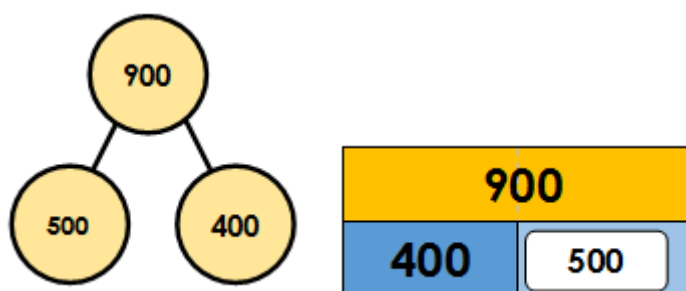
### Modelled DAB Reasoning Response

**D** – There is an odd one out.

**A** – The odd one out is



**B** – This is the odd one out because the total is 1000.  $600 + 400 = 1000$ . The calculations for the other two representations is the same:



$$500 + 400 = 900.$$

### Reasoning 4

**D** – Ranjit is incorrect.

**A** – If you count back in 50s from 80, you will not reach -130.

**B** – Ranjit thinks this because if you count **up** in 50s from 80 you will reach 130, but that is not the case when counting backwards.

$$80 - 50 = 30$$

$$30 - 50 = -20$$

$$-20 - 50 = -70$$

So the sequence would go: 80, 30, -20, -70 and does not reach 130.

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

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

### Problem Solving 1

There are 6 possible calculations with a total of 700.

$$100 + 600 = 700$$

$$200 + 500 = 700$$

$$300 + 400 = 700$$

$$1000 - 300 = 700$$

$$900 - 200 = 700$$

$$800 - 100 = 700$$

