



## DEEPENING UNDERSTANDING ANSWER SHEET

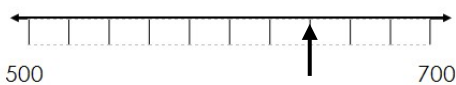
### YEAR 3 /4 PIM – NUMBER LINE TO 1000

#### Fluency 1

Draw an arrow to show 370:



Draw an arrow to show 640:



#### Fluency 2

170, 500

#### Fluency 3

B, A, B

#### Reasoning 1

##### Modelled DAB Reasoning Responses

**D** – True

**A** – 550 is a good estimate for F.

**B** – The F is at the midway point. The starting number is 300 and end number is 800. To find the midway point we find the difference between the two numbers and divide by 2:

$$800 - 300 = 500$$

$$500/2 = 250$$

We then add this onto the starting number:

$$300 + 250 = 550$$

Therefore the midway point is 550.



We might also work out that the intervals increase in 50s and if we count up in 50s we get to 550 at the midway point:

300, 350, 400, 450, 500, 550.

## Reasoning 2

### Modelled DAB Reasoning Response

**D** – Ranjit is incorrect.

**A** – The arrow does not mark 600

**B** – The intervals are increasing in 50s. The arrow is only one interval after 500 so the arrow is pointing to 550, not 600.

## Reasoning 3

### Modelled DAB Reasoning Response D

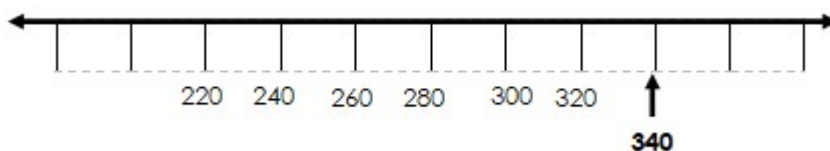
– The statement is correct.

**A** – The number labelled is 340.

**B** – First of all we need to work out what each interval increases in. The intervals are counting in 20s, we know this because there are 4 intervals between 220 and 300. The difference between the two numbers is 80 ( $300 - 220 = 80$ ) and  $80/4 = 20$  (divide by 4 because there are 4 intervals between the two numbers).

When you know that you are counting in 20s you can look at the number already given on the number line (300) and count in 20s from there: 300, 320, 340. So the number labelled is 340.

We can also prove this on the number line:



## Reasoning 4

### Modelled DAB Reasoning Response

**D** – Disagree with Marlon.

**A** – The arrows do not represent the same number.

**B** – Intervals increase by 25 on the top number line so the arrow = 700. On the lower number line, each interval is worth 100 so the arrow represents 600.

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

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

## Problem Solving 1

$775 - 725 = 50$       $50 \div 2 = 25$      Therefore the midpoint = 750

Yes it is possible for Darcey's friend to have the same midpoint (750) but different start/end points, e.g. intervals of 1 : 745 to 755, intervals of 2: 740 to 760, intervals of 10: 700 - 800

## Problem Solving 2

Various answers possible, such as:

Intervals of 1s – 660 to 670

Intervals of 2s – 650 to 670

Intervals of 5s – 620 to 670

Intervals of 10s – 570 to 670

