



# DEEPENING UNDERSTANDING ANSWER SHEET

## YEAR 5 PIM – MULTIPLY 2-DIGITS-BY 2-DIGITS

### Fluency 1

×	30	4
20	600	80
4	120	16

### Fluency 2

5X7   5X50   10X7   10X50

### Fluency 3

		5	3	
×		4	5	
	2	6	5	$5 \times 53 = 265$
2	1	2	0	$40 \times 53 = 2,120$
2	3	8	5	$265 + 2,120 = 2,385$

### Fluency 4

24 X 65=1,560

### Reasoning 1

#### Modelled DAB Reasoning Responses

**D** – There is a mistake

**A** –  $30 \times 50 = 1,500$  not 150

**B** –  $3 \times 5 = 15$ ,  $30 \times 5 = 150$  and so  $30 \times 50 = 1,500$



## Reasoning 2

### Modelled DAB Reasoning Response

**D** – They are false

**A** –  $36 \times 26$  is not equal to  $25 \times 36$ ;  $46 \times 17$  is greater than  $16 \times 47$  and  $53 \times 41$  is less than  $51 \times 43$

**B** – 25 is one less than 26 so the calculations cannot be equal;  $36 \times 26 = 936$  and  $25 \times 36 = 900$

17 is one more than 16 so  $46 \times 17$  must be greater than  $46 \times 16$

$53 \times 41 = 2,173$  and  $51 \times 43 = 2,193$

## Reasoning 3

### Modelled DAB Reasoning Response

**D** – It is sometimes true

**A** – Sometimes a 2-digit number  $\times$  a 2-digit number will give a 4-digit answer but not always

**B** – For example,  $24 \times 24 = 576$  but  $85 \times 85 = 7,225$

## Reasoning 3

The missing digit is 2

	2	4
$\times$	3	2
	4	8
7	2	0
7	6	8

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

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



## Problem Solving 1

Lowest product =  $24 \times 12 = 288$

Even number could be –  $32 \times 21 = 672$ ;  $32 \times 16 = 512$ ;  $32 \times 26 = 832$  etc.

Multiple of 3 = 288; 672; 516 etc. (any 2-digit number multiplied by a multiple of 3 (12/24/21))

