



DEEPENING UNDERSTANDING ANSWER SHEET

YEAR 4 PIM – MULTIPLY 2-DIGITS BY 1-DIGIT

Fluency 1

H	T	O
	10 10 10	1 1
	10 10 10	1 1
	10 10 10	1 1
	10 10 10	1 1
	10 10 10	1 1

	3	2
×		5
1	6	0

Below the base ten blocks, there is a purple circle labeled '100' and a yellow circle labeled '10'. Arrows point from the '100' circle to the first column of the base ten blocks table, and from the '10' circle to the second column.

Start with the ones to exchange to tens if needed.

If there are ten or more ones, exchange for a ten.

If there are ten or more tens, exchange for a hundred.

	2	3
×		4
	9	2

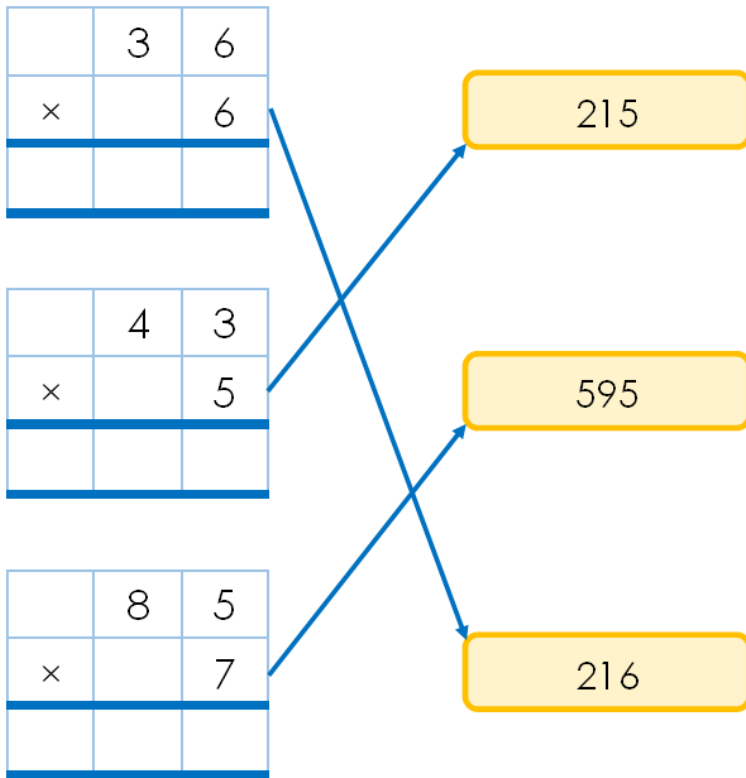
1

	4	5
×		6
2	7	0

2 3



Fluency 2



Fluency 3

	2	8
×		8
<hr/>		
2	2	4
2	6	

Fluency 4

	5	6
×		5
<hr/>		
2	8	0
2	3	

Reasoning 1

Modelled DAB Reasoning Responses

D – I agree with Jane.

A – She will need to exchange the ones for this calculation.

B – We start with the ones to exchange to tens if needed. $7 \times 3 = 21$ so we will need to exchange 20 ones to 2 tens.

Reasoning 2

Modelled DAB Reasoning Response

D – One of the calculations is different.

A – $38 \times 9 = 272$ is the odd one out. $56 \times 4 = 224$ and $24 \times 7 = 168$ are both correct. $38 \times 9 = 272$ is not correct.

B – The 7 exchanged tens have not been added to the 27 tens. The correct answer is 342.

Reasoning 3

Modelled DAB Reasoning Response

D – Sometimes

A – Sometimes there is one exchange when multiplying a 2-digit number by a 1-digit number. Sometimes there are no exchanges or two exchanges.

B – There is one exchange in the calculation: $23 \times 4 = 92$; $3 \times 4 = 12$ so ten of the ones are exchanged for one ten.

There are two exchanges in the calculation: $65 \times 7 = 455$; $5 \times 7 = 35$ so 30 ones are exchanged for 3 tens. $60 \times 7 = 420$ and $420 + 3 \text{ tens} = 45 \text{ tens}$ so 40 of the tens are exchanged for 4 hundreds.

There are no exchanges in the calculation $34 \times 2 = 68$; $4 \times 2 = 8$ and $30 \times 2 = 60$.



Reasoning 4

Modelled DAB Reasoning Response

D – The missing number from the first calculation is 3. The missing number from the second calculation is 8.

A – I used the numbers that I can see and the products to find the missing numbers.

B – In the first calculation, I can see that there are 2 ones in the 2-digit number. When this is multiplied by the missing number, it gives me a number with 6 ones. I know that $2 \times 3 = 6$, and if I multiply the 3 tens by 3 then I get 9 tens which I can also see in the product. $32 \times 3 = 96$ so 3 is the missing number.

In the second calculation, I can see that there are 3 ones in the 2-digit number and 4 ones in the 4-digit number. $3 \times 4 = 12$ so ten ones have been exchanged and added to the tens column. There are 33 tens in my answer so if I remove the one ten that is added then I get 32 tens. I know that when 4 is multiplied by 80, it gives the product 320. $83 \times 4 = 332$ so 8 is the missing number.

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

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

Problem Solving 1

There is one possible solution:



Darcey

	5	4
×		3
1	6	2

=

	2	7
×		6
1	6	2



Asha