Multiply 4-Digits by 2-Digits

7a. Use all of the digit cards in the calculation below to make the closest possible number to 240,000.

7	6	4

□ □ 2 5 x 3 □

GD PS

Multiply 4-Digits by 2-Digits

7b. Use all of the digit cards in the calculation below to make the closest possible number to 260,000.

2	8	9

□ 2 □ 4 x □ 7

GD PS

8a. Philip has worked out the answer to 3,186 x 47 below.

		3	1	8	6
x				4	7
	2	2 (1)	3 (6)	0 (4)	2
1	2	7 (3)	2 (2)	4	0
1	4	9	5	4	2

Is Philip correct?
Explain your answer.

GD R

8b. Amy has worked out the answer to 8,527 x 65 below.

		8	5	2	7
x				6	5
	4	2 (2)	6 (1)	3 (3)	5
5	1 (3)	1 (1)	6 (4)	2	0
5	5	4	2	5	5

1

Is Amy correct?
Explain your answer.

GD R

9a. Paul says,

I am thinking of a 4-digit number between four thousand and five thousand.
The total of the digits in my number is nineteen.
If I multiply my number by fourteen, I get an answer between sixty-five thousand and seventy thousand.

What could Paul's number be?
Find two possible numbers.

GD PS

9b. David says,

I am thinking of a 4-digit number between three thousand and four thousand.
The total of the digits in my number is twenty.
If I multiply my number by twenty-six, I get an answer between ninety thousand and ninety-one thousand.

What could David's number be?
Find two possible numbers.

GD PS

Reasoning and Problem Solving
Multiply 4-Digits by 2-Digits

Developing

1a. 2,211 x 23 = 50,853

2a. An explanation that recognises Jake has not correctly multiplied the thousands in the first number by the tens in the second number.

3a. Various answers, for example: 2,311 x 23 = 53,153 and 2,322 x 23 = 53,406

Expected

4a. 7,931 x 21 = 166,551

5a. An explanation that recognises Tom has not included a place holder when multiplying his tens.

6a. Various answers, for example: 1,682 x 13 = 21,866 and 1,673 x 13 = 21,749

Greater Depth

7a. 6,425 x 37 = 237,725

8a. An explanation that recognises Philip has not added on the 2 hundreds which were carried over from the multiplication of the 4 tens and the 6 ones.

9a. Various answers, for example: 4,735 x 14 = 66,290 and 4,726 x 14 = 66,164

Reasoning and Problem Solving
Multiply 4-Digits by 2-Digits

Developing

1b. 2,140 x 21 = 44,940

2b. An explanation that recognises that Tina has not correctly multiplied the tens in both numbers.

3b. Various answers, for example: 3,221 x 21 = 67,641 and 3,321 x 21 = 69,741

Expected

4b. 2,317 x 12 = 27,804

5b. An explanation that recognises Julie has not added the thousand carried over from the 3 x 6 hundreds.

6b. Various answers, for example: 2,512 x 14 = 35,168 and 2,612 x 14 = 36,568

Greater Depth

7b. 9,284 x 27 = 250,668

8b. Amy is correct. Multiplications have been done correctly, ensuring correct values have been carried.

9b. Various answers, for example: 3,494 x 26 = 90,844 and 3,476 x 26 = 90,376