

 a) Hugo has not used 0 as a placeholder when he multiplied 2 x 40, so he has recorded the answer as 8 rather than 80.

b) Hugo has not added the ten that he exchanged when he calculated $4 \times 3 = 12$.

c) Hugo should not have added in the regrouped digits during the final step of the calculation.

2)	42 × 38 =	12 × 13 =	68 × 11		
	Long multiplication. These numbers are more challenging and therefore a mental method would not be efficient or reliable.	Use mental methods and jottings with times tables knowledge. You could find 12 × 12 and then add another 12.	Use mental methods and jottings. You could find 10 × 68 and then add another 68.		

3) 42 × 38 = 1596 12 × 13 = 156 68 × 11 = 748

1)			4	3			7	6
		×	5	3		×	2	2
		1	2	9		1	5 1	2
	2	1 1	5	0	1	5 1	2	0
	2	2	7	9	1	6	7	2

2) Children should notice that the hundreds, tens and ones are all the same digit. For example:

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2+2+2=6 6×37=222
5+5+5=15 15×37=555
3+3+3=9 9×37=333
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3) Children should notice that every single one-digit number fits the pattern. Children may or may not find an explanation for this independently; you may wish to discuss explanations as a group, as there are a few good explanations.
One example explanation is: (7 + 7 + 7) x 37 = (7 x 3) x 37 = 7 x (3 x 37) = 7 x (111) = 777, and the same for other digits. Another might be that: (1 + 1 + 1) x 37 = 3 x 37 = 111. If you replace the 1s with 2s, this would double the answer and you would get 222 - and so on for every other number up to 9.

For two-digit numbers, children would notice that numbers under 37 give answers where the hundreds and tens digits are the same. However, with numbers 37 and over, this does not always work.



