Bronze

1b. 2,232 x 3 = 6,696. Deb has not multiplied 2 by 3 correctly.

2b.

	1	2	1	4
x				2
	2	4	2	8

4a. True

5a. 3,572 x 3 = 10,716

6a. 6,405 x 4 = 25,620

3b. No, Mrs Juarez is not correct because £2,431 x 2 = £4,862, not £2,861.

Silver

1a. False. 3,312 x 3 = 9,936

2a. 1,111 x 4 = 4,444

3a. 2,213 x 3 = 6,639

4b. 8,126 x 4 = 32,504. Chara has not used 0 as a place holder.

5b.

	7	0	8	4
x				2
1	4	1	6	8
		1		

6b. No, Mr North is not correct because £4,862 x 3 = £14,586, not £14,486.

Gold

7b. 8,126 x 9 = 73,134. Sanjay has not added the hundreds when exchanging.

8b.

	2	7	8	0
x				7
1	9	4	6	0
	5	5		

7a. False. 3,472 x 4 = 13,888

8a. 5,128 x 5 = 25,640
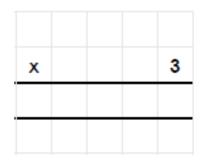
9a. 7,052 x 4 = 28,208

9b. No, Mrs Sajjad is not correct because £1,991 x 6 = £11,946, not £11,446.

Challenge

1. Ivan the bank manager has forgotten the code to enter the underground vault at his bank. He remembers that the code was the result of multiplying a 4-digit number by 3.

The 4-digit number Ivan multiplied was made from the digits 0-9 where each digit was only used once. The code was a 4-digit number, and one of the digits was repeated twice within the code.

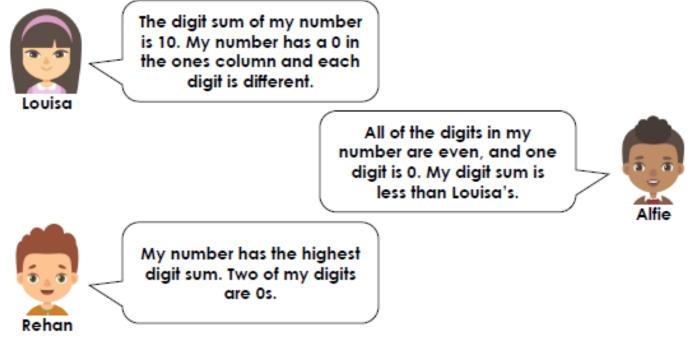|			
X			3

Explore what the 4-digit code could be.
Various answers, for example: 1,248 x 3 = 3,744, which could be the code because the digit 4 is repeated twice.

2. Louisa, Alfie and Rehan are playing a game. They are multiplying their 4-digit numbers by 6 to see whose answer is closest to 10,000. They each give clues for their 4-digit numbers.

Louisa: The digit sum of my number is 10. My number has a 0 in the ones column and each digit is different.

Alfie: All of the digits in my number are even, and one digit is 0. My digit sum is less than Louisa's.

Rehan: My number has the highest digit sum. Two of my digits are 0s.

Investigate what each of their numbers could be and who could have won the game.
Various answers, for example: Louisa could have 1,270 x 6 = 7,620; Alfie could have 2,220 x 6 = 13,121; Rehan could have 5,600 x 6 = 33,600. In this case, Alfie would win.