Efficient subtraction

White Rose Maths

1 **a)** Use the column method to work out 704 − 696

	H	T	O
	⁶7̸ ⁹0̸ ¹4		
−	6	9	6
	0	0	8

b) Count on the number line to work out 704 − 696

695 696 697 698 699 700 701 702 703 704 705

c) Which method do you prefer? Why?

Various answers.

2 Complete the subtractions by counting on.

a) 902 − 897 = ☐ 5

b) 1,902 − 1,894 = ☐ 8

c) 2,027 − 1,999 = ☐ 28

3 **a)** Use column subtraction to complete the calculations.

		H	T	O
		⁶7̸ ⁹0̸ ⁹0̸		
	−	3	4	8
		3	5	2

	Th	H	T	O
	⁵6̸ ⁹0̸ ⁹0̸ 0			
−	2	1	4	5
	3	8	5	5

What do you notice?

You have to make multiple exchanges in each.

b) **Rosie's method**

	H	T	O
	6	9	9
−	3	4	8
	3	5	1

351 + 1 = 352

so 700 − 348 = 352

Use Rosie's method to work out 6,000 − 2,145

	5	9	9	9
−	2	1	4	5
	3	8	5	4

3854 + 1 = 3855

3,855

c) Amir's method

	H	T	O
	7	0	0
−	3	4	8
	3	5	2

(crossed out)

	H	T	O
	6	9	9
−	3	4	7
	3	5	2

Use Amir's method to work out 6,000 − 2,145

	5	9	9	9
−	2	1	4	4
	3	8	5	5

3,855

d) Whose method do you prefer, Rosie's or Amir's?

4 Use the column method to work out the subtractions.

a) 500 − 341

1 5 9

c) £3,000 − £2,782

£ 2 1 8

b) 1,000 − 729

2 7 1

d) 10,000 mm − 7,302 mm

2,6 9 8 mm

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5 A theme park has 3,002 light bulbs.

1,785 of the light bulbs are blue.

How many bulbs are not blue?

Use a method where you subtract 3 from each number.

1,217

6 Eva is working out 7,385 − 1,999

7,385 − 2,000 = 5,385

7,385 − 1,999 = 5,386

> I subtracted 2,000 from 7,385 and then added one on.

a) Explain why Eva's method works.

She is subtracting 1 less than 2,000 so she subtracts 2,000 then adds 1 back on

b) Explain a different method that Eva could have used.

The method should involve changing each number before subtracting.

She could add 1 to each number so the difference doesn't change and calculate 7,386 − 2,000

c) Work out the subtractions.

4,512 − 2,999 = 1,513

5,147 − 997 = 4,150

3,704 − 2,998 = 706

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