

Maths Home Learning - White Rose

Week 10

There will be 5 Maths lessons.

This PowerPoint contains an overview of the week, links to the WhiteRose Hub website for video lessons, the answers from the work sheets and a description of different ways to upload your work.

There will also be extra challenges for each day.

Maths Home Learning Tip!

If the links don't work when you click on them in the PowerPoint, copy and paste the link into your browser.

Week 10 Overview

Monday - Subtract two 4-digit numbers (no exchange)

Tuesday - Subtract two 4-digit numbers (one exchange)

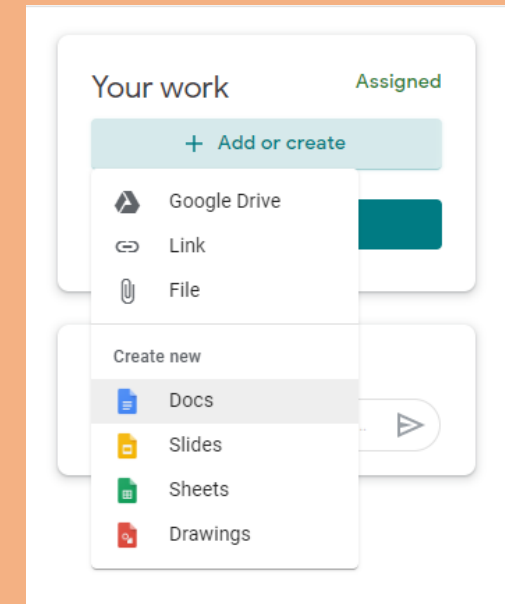
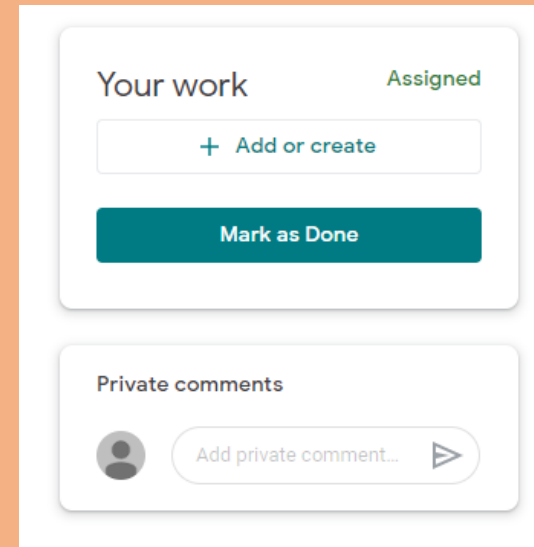
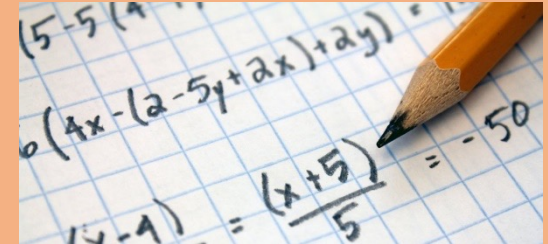
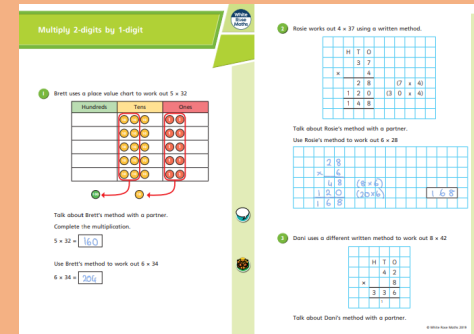
Wednesday - Subtract two 4-digit numbers (more than one exchange)

Thursday - Efficient Subtraction

Friday - Challenges

Ways to complete the activities

1. You can print the activity sheet, complete the work, take a photo and upload it under the Maths assignment.
2. You can leave the activity sheet on a screen, write your answers on a piece of paper, take a photo and upload it under the Maths assignment.
3. You can create a **Google Doc**, type your answers into it and submit the **Google Doc** under the Maths assignment.



Monday - Subtract two 4-digit numbers (no exchange)

<https://vimeo.com/427996624>

Click the link, watch the video of the day and complete Sheet 1 and Sheet 2.

(You can then complete **Monday Challenge** if you want to do more maths.)

Remember to self mark or ask a sibling or parent to mark it.

Monday - Sheet 1

Subtract two 4-digit numbers – no exchange



1 Use the place value chart to work out $5,624 - 2,301$

Th	H	T	O
1,000 1,000 1,000 1,000	100 100 100 100	10 10	1 1 1 1

$$5,624 - 2,301 = \boxed{}$$

Complete the calculation.

	Th	H	T	O
	5	6	2	4
-	2	3	0	1

What is the same about the representations?

What is different?

2 Use the place value charts to complete the calculations.

a) $3,412 - 1,201$

Th	H	T	O
1,000 1,000 1,000	100 100 100	10	1 1

	Th	H	T	O
	3	4	1	2
-	1	2	0	1

b) $5,361 - 3,241$

Th	H	T	O
1,000 1,000 1,000 1,000	100 100 100	10 10 10 10	1

	Th	H	T	O
	5	3	6	1
-	3	2	4	1

c) $7,405 - 404$

Th	H	T	O
1,000 1,000 1,000 1,000	100 100 100		1 1 1 1

	Th	H	T	O
	7	4	0	5
-		4	0	4

3 Complete the calculations.

a)

	Th	H	T	O
	9	3	1	6
-	7	2	0	5

c)

	Th	H	T	O
	4	9	2	7
-		3	1	5

b)

	Th	H	T	O
	8	0	6	1
-	3	0	6	0

Monday - Sheet 2

- 4 Aisha is calculating $7,585 - 316$

	Th	H	T	O
	7	5	8	5
-	3	1	6	
	4	4	2	5

$$7,585 - 316 = 4,425$$

Do you agree with Aisha? _____

Explain your answer.

- 5 Complete the calculations. Show your workings.

a) $6,205 - 104 =$

b) $3,749 - 1,642 =$

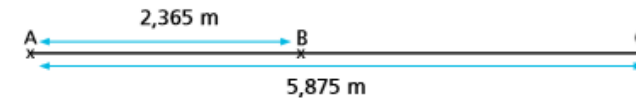
c) $= 5,371 - 3,260$

d) $= 9,853 - 853$

- 6 The distance from A to B is 2,365 m.

The distance from A to C is 5,875 m in the same direction.

How far is C from B?



- 7 Whitney and Ron are playing a game.




Whitney has 1,353 points.

Ron has 230 points fewer than Whitney.

How many points do they have altogether?

Monday Challenge

📌 Eva uses place value counters to calculate $3,454 - 1,224$

Th	H	T	O
			

	Th	H	T	O
	3	4	5	4
–	1	2	2	4
	2	2	3	0

Use Eva's method to calculate:

$$2,348 - 235 = \underline{\quad}$$

$$\underline{\quad} = 4,572 - 2,341$$

$$6,582 - 582 = \underline{\quad}$$

$$\underline{\quad} = 7,262 - 7,151$$

Monday Challenge Answers



Eva uses place value counters to calculate $3,454 - 1,224$

Th	H	T	O
			

	Th	H	T	O
	3	4	5	4
–	1	2	2	4
	2	2	3	0

Use Eva's method to calculate:

$$2,348 - 235 = \underline{\quad} \text{2,113}$$

$$\underline{\quad} \text{2,231} = 4,572 - 2,341$$

$$6,582 - 582 = \underline{\quad} \text{6,000}$$

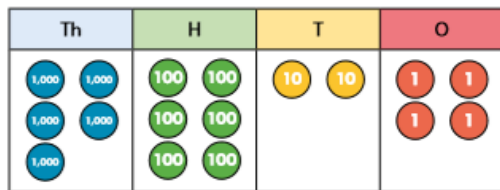
$$\underline{\quad} \text{111} = 7,262 - 7,151$$

Monday - Answers

Subtract two 4-digit numbers – no exchange

White
Rose
Maths

1 Use the place value chart to work out $5,624 - 2,301$



$$5,624 - 2,301 = 3,323$$

Complete the calculation.

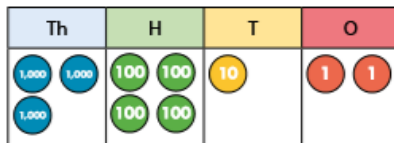
	Th	H	T	O
	5	6	2	4
-	2	3	0	1
	3	3	2	3

What is the same about the representations?

What is different?

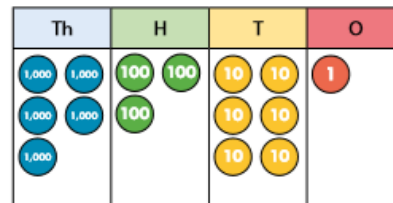
2 Use the place value charts to complete the calculations.

a) $3,412 - 1,201$



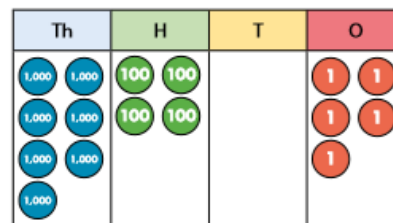
	Th	H	T	O
	3	4	1	2
-	1	2	0	1
	2	2	1	1

b) $5,361 - 3,241$



	Th	H	T	O
	5	3	6	1
-	3	2	4	1
	2	1	2	0

c) $7,405 - 404$



	Th	H	T	O
	7	4	0	5
-		4	0	4
	7	0	0	1

3 Complete the calculations.

a)

	Th	H	T	O
	9	3	1	6
-	7	2	0	5
	2	1	1	1

c)

	Th	H	T	O
	4	9	2	7
-		3	1	5
	4	6	1	2

b)

	Th	H	T	O
	8	0	6	1
-	3	0	6	0
	5	0	0	1

Monday - Answers

- 4 Aisha is calculating $7,585 - 316$

	Th	H	T	O	
	7	5	8	5	
-	3	1	6		
	4	4	2	5	

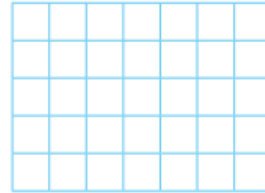
$$7,585 - 316 = 4,425$$

Do you agree with Aisha? No

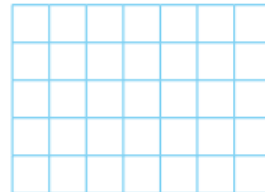
Explain your answer.

- 5 Complete the calculations. Show your workings.

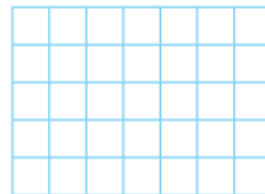
a) $6,205 - 104 =$ 6,101



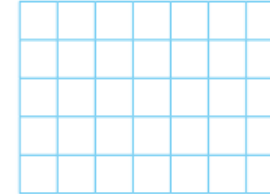
b) $3,749 - 1,642 =$ 2,107



c) 2,111 $= 5,371 - 3,260$



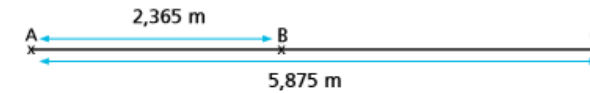
d) 9,000 $= 9,853 - 853$



- 6 The distance from A to B is 2,365 m.

The distance from A to C is 5,875 m in the same direction.

How far is C from B?



3,510 m

- 7 Whitney and Ron are playing a game.

Whitney has 1,353 points.

Ron has 230 points fewer than Whitney. (1,123 points)

How many points do they have altogether?

2,476

Tuesday - Subtract two 4-digit numbers (one exchange)

<https://vimeo.com/428000196>

Click the link, watch the video of the day and complete Sheet 1 and Sheet 2.

(You can then complete Tuesday challenge if you want to do more maths.)

Remember to self mark or ask a sibling or parent to mark it.

Tuesday - Sheet 1

Subtract two 4-digit numbers – one exchange



1

Th	H	T	O
1,000 1,000	100 100	10 10	1 1
1,000 1,000	100 100	10	1 1
1,000			1

a) Use the place value chart to complete the calculation.

$$5,435 - 3,215 = \square$$

b) Use the place value chart to complete the calculation.

$$5,435 - 3,216 = \square$$

c) Which calculation was easier? Talk about it with a partner.

d) What happens when you don't have enough counters in a column to take away?

2

Complete the sentences.

1 ten can be exchanged for ones.

1 hundred can be exchanged for 10 _____.

1 thousand can be exchanged for _____.

3

Use a place value chart to complete the calculations.

a)

	H	T	O
	3	2	7
-	1	1	9

c)

Th	H	T	O
9	8	4	5
-	6	2	1

b)

Th	H	T	O
7	6	7	3
-	1	3	4

4

Use a place value chart to complete the calculations.

a)

H	T	O
3	2	7
-	1	3

c)

Th	H	T	O
9	8	4	5
-	2	3	6

b)

Th	H	T	O
7	6	7	3
-	2	8	1

Tuesday - Sheet 2

- 5 Use a place value chart to complete the calculations.

a)

	Th	H	T	O
	3	2	7	0
-	1	3	2	0

c)

	Th	H	T	O
	9	8	4	5
-	1	9	2	1

b)

	Th	H	T	O
	7	6	7	3
-		7	2	1

- 6 Annie is calculating $3,467 - 2,148$.
Here is her working.

	Th	H	T	O
	3	4	6	7
-	2	1	4	8
	1	3	2	1

Do you agree with Annie? _____

Explain your answer.



- 7 A car costs £8,716

A motorbike costs £2,341 less than the car.

How much does the motorbike cost?

- 8 Jack is thinking of two 4-digit numbers.



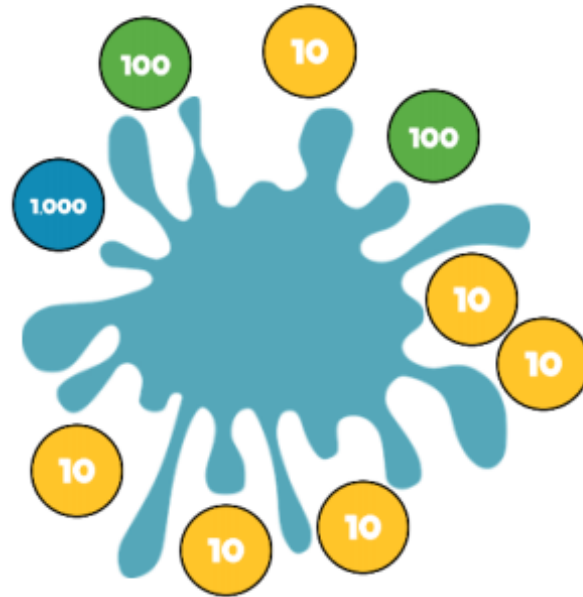
The greater number is 6,410.
The difference between the
two numbers is 3,107

What is the sum of the two numbers?



Tuesday Challenge

There are counters to the value of 3,470 on the table but some have been covered by the splat.



What is the total of the counters covered?
How many different ways can you make the missing total?

Tuesday Challenge Answers

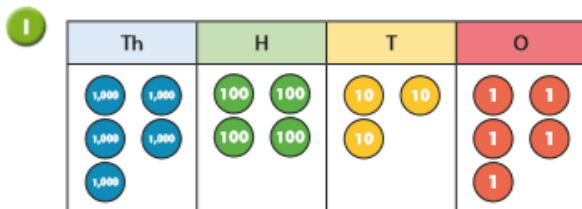
$$3470 - 1260 = 2210$$

Possible answers include:

- two 1000s, two 100s and one 10
- twenty-two 100s and one 10
- twenty-two 100s and ten 1s

Tuesday - Answers

Subtract two 4-digit numbers – one exchange



a) Use the place value chart to complete the calculation.

$$5,435 - 3,215 = \boxed{2,220}$$

b) Use the place value chart to complete the calculation.

$$5,435 - 3,216 = \boxed{2,219}$$

c) Which calculation was easier? Talk about it with a partner.

d) What happens when you don't have enough counters in a column to take away?

You need to make an exchange

2 Complete the sentences.

1 ten can be exchanged for 10 ones.

1 hundred can be exchanged for 10 tens.

1 thousand can be exchanged for 10 hundreds.



3 Use a place value chart to complete the calculations.



a)

	H	T	O
	3	2	7
-	1	1	9
	2	0	8

c)

	Th	H	T	O
	9	8	4	5
-	6	2	1	6
	3	6	2	9

b)

	Th	H	T	O
	7	6	7	3
-		1	3	4
	7	5	3	9

4 Use a place value chart to complete the calculations.



a)

	H	T	O
	3	2	7
-	1	3	2
	1	9	5

c)

	Th	H	T	O
	9	8	4	5
-	2	3	6	0
	7	4	8	5

b)

	Th	H	T	O
	7	6	7	3
-		2	8	1
	7	3	9	2

Tuesday - Answers

- 5 Use a place value chart to complete the calculations.

a)

	Th	H	T	O
	3	2	7	0
-	1	3	2	0
	1	9	5	0

c)

	Th	H	T	O
	9	8	4	5
-	1	9	2	1
	7	9	2	4

b)

	Th	H	T	O
	7	6	7	3
-		7	2	1
	6	9	5	2

- 6 Annie is calculating $3,467 - 2,148$.
Here is her working.

	Th	H	T	O
	3	4	6	7
-	2	1	4	8
	1	3	2	1

Do you agree with Annie? No

Explain your answer.

She has found the difference between the numbers in each column rather than making an exchange.



- 7 A car costs £8,716.
A motorbike costs £2,341 less than the car.
How much does the motorbike cost?

£6,375

- 8 Jack is thinking of two 4-digit numbers.



The greater number is 6,410.
The difference between the two numbers is 3,107

What is the sum of the two numbers?



9,713



Wednesday - Subtract two 4-digit numbers (more than one exchange)

<https://vimeo.com/428000367>

Click the link, watch the video of the day and complete Sheet 1 and Sheet 2.

(You can then complete the **Wednesday Challenge** if you want to do more maths.)


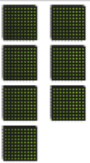

Remember to self mark or ask a sibling or parent to mark it.

Wednesday - Sheet 1

Subtract two 4-digit numbers – more than one exchange



- 1 Kim has made a number using base 10

Th	H	T	O
			

- a) Subtract 8 from Kim's number.

- b) Explain the method you used.

- c) Subtract 20 from Kim's number.

- d) Subtract 900 from Kim's number.




- e) Complete the subtractions.

$1,702 - 28 = \boxed{}$

$1,702 - 928 = \boxed{}$



- 2 Use the place value chart to complete the subtractions.

H	T	O
		

a) $564 - 354 = \boxed{}$ c) $564 - 365 = \boxed{}$


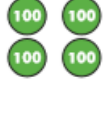

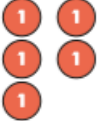
b) $564 - 355 = \boxed{}$

Look at your calculations in parts a), b) and c).

What is the same? What is different?



- 3 Use the place value chart to complete the subtractions.

Th	H	T	O
			

a) $5,435 - 2,036 = \boxed{}$

b) $5,436 - 2,036 = \boxed{}$

c) $5,437 - 2,036 = \boxed{}$

Look at your calculations in parts a), b) and c).

What is the same? What is different?



Wednesday - Sheet 2

4 Complete the calculations.

a)

	Th	H	T	O
	7	3	2	5
-	2	4	0	6

c)

	Th	H	T	O
	7	1	0	2
-		3	9	8

b)

	Th	H	T	O
	5	6	3	4
-	2	7	4	5

d)

	Th	H	T	O
	5	0	0	0
-	1	7	3	3

5 A jug contains 1,500 ml of juice.



The juice is poured into 2 glasses.
Each glass holds 258 ml of juice.
How much juice is left in the jug?



6 Work out the missing digits.

a)

	Th	H	T	O
	7			4
-	1	2	3	
		9	5	8

b)

	Th	H	T	O
	4	0		3
-			3	8
		8	4	

7 Arrange all the digit cards to make a possible subtraction for each description.

0	1	2	3	4	5	6	7
---	---	---	---	---	---	---	---

a) There are 2 exchanges.
The answer is
less than 2,000

-			

b) There are 2 exchanges.
The answer is
greater than 4,000

-			

c) There are 3 exchanges.

-			

Wednesday Challenge



1,235 people go on a school trip.

There are 1,179 children and 27 teachers.
The rest are parents.

How many parents are there?

Explain your method to a friend.

Wednesday Challenge Answer

Add children and teachers together first.

$$1,179 + 27 = 1,206$$

Subtract this from total number of people.

$$1,235 - 1,206 = 29$$




29 parents.

Wednesday - Answers

Subtract two 4-digit numbers – more than one exchange



- 1 Kim has made a number using base 10

Th	H	T	O
			

- a) Subtract 8 from Kim's number.

1,694

- b) Explain the method you used.

Exchange 1 hundred for 10 tens then 1 ten for 10 ones.

- c) Subtract 20 from Kim's number.

1,682

- d) Subtract 900 from Kim's number.

802




- e) Complete the subtractions.

$$1,702 - 28 = 1,674$$

$$1,702 - 928 = 774$$



- 2 Use the place value chart to complete the subtractions.

H	T	O
		

a) $564 - 354 = 210$





c) $564 - 365 = 199$

b) $564 - 355 = 209$

Look at your calculations in parts a), b) and c).

What is the same? What is different?

- 3 Use the place value chart to complete the subtractions.

Th	H	T	O
			

a) $5,435 - 2,036 = 3,399$

b) $5,436 - 2,036 = 3,400$

c) $5,437 - 2,036 = 3,401$

Look at your calculations in parts a), b) and c).

What is the same? What is different?

Wednesday - Answers

4 Complete the calculations.

a)

	Th	H	T	O
	7	3	2	5
-	2	4	0	6
	4	9	1	9

c)

	Th	H	T	O
	7	1	0	2
-		3	9	8
	6	7	0	4

b)

	Th	H	T	O
	5	6	3	4
-	2	7	4	5
	2	8	8	9

d)

	Th	H	T	O
	5	0	0	0
-	1	7	3	3
	3	2	6	7

5 A jug contains 1,500 ml of juice.



The juice is poured into 2 glasses.
Each glass holds 258 ml of juice.
How much juice is left in the jug?



984ml

6 Work out the missing digits.

a)

	Th	H	T	O
	7	1	8	4
-	1	2	3	6
	5	9	5	8

b)

	Th	H	T	O
	3	0	8	3
-		2	3	8
	3	8	4	5

7 Arrange all the digit cards to make a possible subtraction for each description.

0	1	2	3	4	5	6	7
---	---	---	---	---	---	---	---

a) There are 2 exchanges.
The answer is less than 2,000

Examples.

E.g.

	2	3	5	3
-	1	0	6	4

b) There are 2 exchanges.
The answer is greater than 4,000

5. E.g.

	7	6	4	0
-	2	3	5	1

c) There are 3 exchanges.

E.g.

	7	4	2	0
-	6	5	3	1

Thursday - Efficient Subtraction

<https://vimeo.com/428003455>

Click the link, watch the video of the day and complete Sheet 1 and Sheet 2.

(You can then complete Thursday challenge, if you want to do more maths.)

Remember to self mark or ask a sibling or parent to mark it.

I a) Use the column method to work out $704 - 696$

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



2 Complete the subtractions by counting on.

c) $2,027 - 1,999 =$

3 a) Use column subtraction to complete the calculations.

		Th	H	T	O
		6	0	0	0
	-	2	1	4	5
		<hr/>			
		<hr/>			


What do you notice?

b) Rosie's method

$$351 + 1 = 352$$

so $700 - 348 = 352$

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

A 10x10 grid of squares. A small rectangle is drawn in the bottom right corner, spanning 2 squares horizontally and 1 square vertically.

Thursday - Sheet 2

c) Amir's method

		H	T	O	
		6	9	9	
	-	3	4	7	
		3	5	2	

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


A 10x10 grid with a rectangle drawn in the bottom right corner, spanning 2 units wide and 1 unit high.

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


4 Use the column method to work out the subtractions.

a) $500 - 341$

c) £3,000 – £2,782



b) 1,000 – 729



d) 10,000 mm – 7,302 mm

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.

11

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.

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

The method should involve changing each number before subtracting.

c) Work out the subtractions.

$4,512 - 2,999 =$

$5,147 - 997 =$

$3,704 - 2,998 =$

Thursday Challenge

Amir has £1,000



He buys a scooter for £345 and a skateboard for £110

How much money does he have left?

Show 3 different methods of finding the answer.

Explain how you completed each one.

Which is the most effective method?

Thursday Challenge Answer

Children should
use the three
methods
demonstrated in
the varied fluency
section to get an
answer of £545

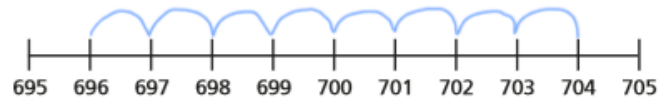
Thursday - Answers

Efficient subtraction

- 1 a) Use the column method to work out $704 - 696$

	H	T	O	
	7	0	4	
-	6	9	6	
	0	0	8	

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



- 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	
	7	0	0	
-	3	4	8	
	3	5	2	

	Th	H	T	O	
	5	0	0	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	

$$351 + 1 = 352$$

$$\text{so } 700 - 348 = 352$$

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

	5	9	9	9		3	8	5	4	+	1	=	3	8	5	5	
-	2	1	4	5													
	3	8	5	4													

3,855

Thursday - Answers

c) Amir's method

		H	T	O
		7	0	0
-		3	4	8
		3	5	2

		H	T	O
		6	9	9
	-	3	4	7
		3	5	2

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

[illegible]

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) $10,000 \text{ mm} - 7,302 \text{ mm}$

2	6	9	8	mm		

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.

6 Eva is working out $7,385 - 1,999$

$$7,385 - 2,000 = 5,385$$

$$7,385 - 1,999 = 5,386$$

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.

$$4,512 - 2,999 = 1,513$$

$$5,147 - 997 = 4,150$$

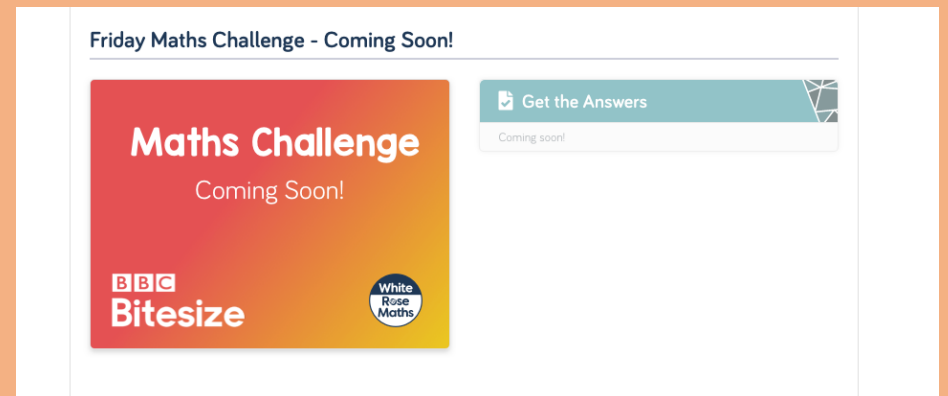
$$3,704 - 2,998 = 706$$

Friday - Reasoning Challenges

<https://whiterosemaths.com/homelearning/year-4/>

Have a go at completing the White Rose Maths Challenge

The video should be under Summer Term - Week 9
(w/c 15th June)



Friday Challenge - Extra

Look at each pair of calculations.
Which one out of each pair has the same difference as $2,450 - 1,830$?

$$2,451 - 1,831$$

$$2,451 - 1,829$$

$$2,500 - 1,880$$

$$2,500 - 1,780$$

$$2,449 - 1,829$$

$$2,449 - 1,831$$

When is it useful to use difference to solve subtractions?

Friday Challenge Answer

2,451 – 1,831

Added one to each number.

2,500 – 1,880

Added 50 to both numbers.

2,449 – 1,829

Subtracted one from each number.

The difference is
620