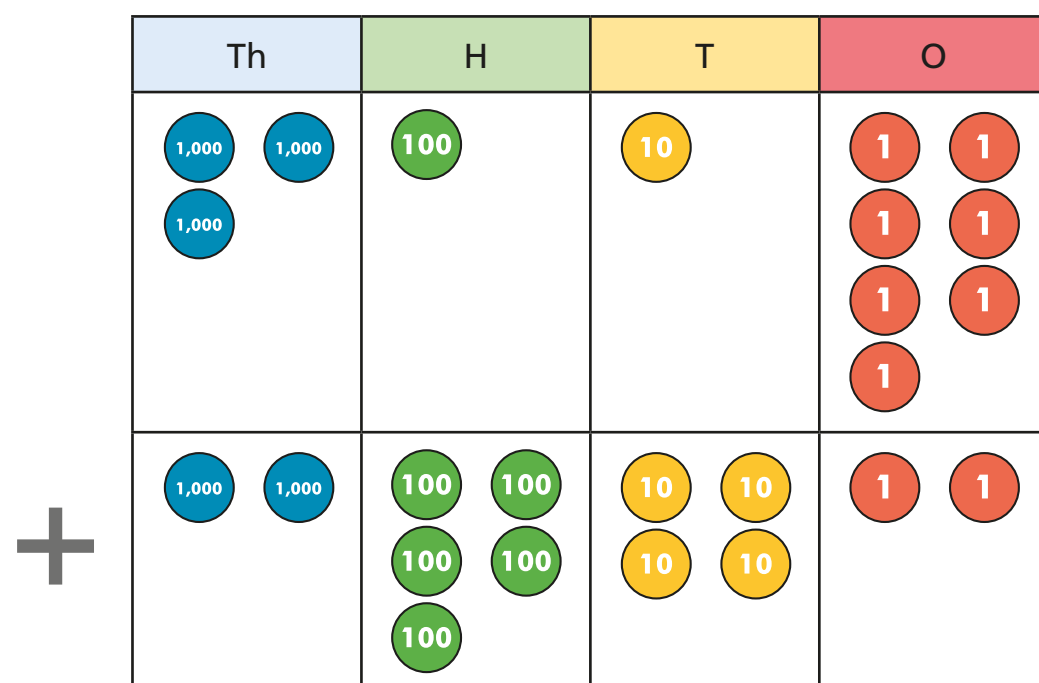


Add two 4-digit numbers – one exchange

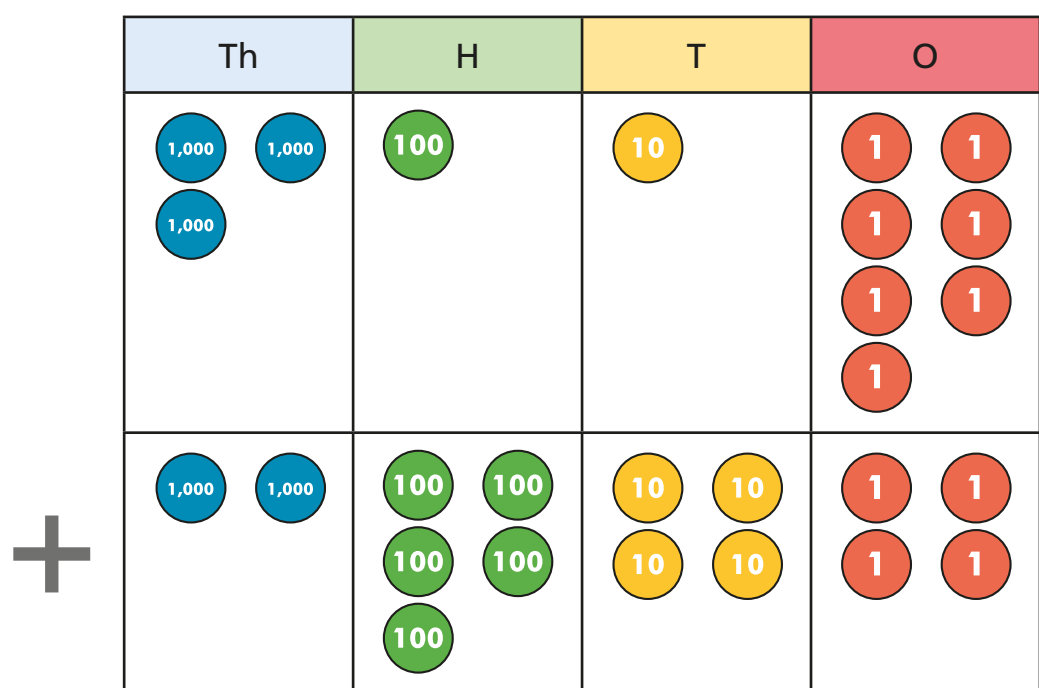
1 Complete the calculations.

Use the place value charts to help you.

a) $3,117 + 2,542 =$



b) $3,117 + 2,544 =$



c) What do you notice about the calculations in part a) and part b)?

Which did you find easier and why?

d) What happens when you have more than 10 counters in one column?

2 Complete the calculations.

a) $4,365 + 2,617 =$

b) $1,907 + 5,068 =$

c) $6,792 + 163 =$

d) $3,247 + 1,930 =$

3 Complete the calculations.

a)

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

b)

	Th	H	T	O
	7	2	6	1
+	1	0	2	9

c)

		Th	H	T	O	
			7	0	3	
	+	2	5	8	0	

d)

		Th	H	T	O	
		3	5	0	8	
	+	2	7	3	1	

4 Four children have calculated $4,635 + 183$

Rosie's method

		Th	H	T	O	
		4	6	3	5	
	+		1	8	3	
		4	7	11	8	

$$4,635 + 183 = 47,118$$

Jack's method

		Th	H	T	O	
		4	6	3	5	
	+		1	8	3	
		4	7	1	8	

$$4,635 + 183 = 4,718$$

Alex's method

		Th	H	T	O	
		4	6	3	5	
	+		1	8	3	
		4	8	1	8	
			1			

$$4,635 + 183 = 4,818$$

Teddy's method

		Th	H	T	O	
		4	6	3	5	
	+	1	8	3		
		6	4	6	5	
		1				

$$4,635 + 183 = 6,465$$

Whose method is correct? _____

Talk about the mistakes the other children have made.



5

A

B

C

D

Mr Robson has £2,100 to spend on a mobile phone and a laptop.

What combinations of laptops and phones can he afford to buy?

6 Fill in the missing digits.

a)

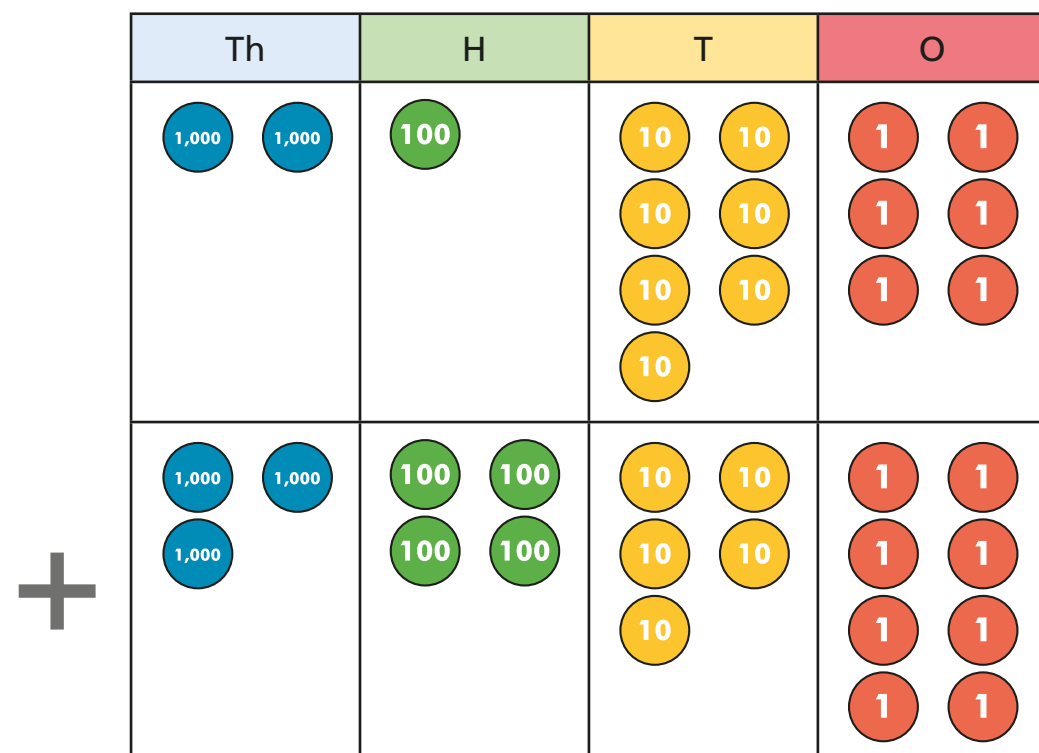
		Th	H	T	O	
		3		2		
	+		4		6	
		8	7	9	1	

b)

		Th	H	T	O	
	+	3	8	2	1	
		8	7	9	1	

Add two 4-digit numbers – more than one exchange

1 Complete the calculation.



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

2 Who has got each question correct? Tick your answer.

a) Nijah

		H	T	O
		4	4	5
	+	3	4	8
		78	1	3

Scott

		H	T	O
		4	4	5
	+	3	4	8
		7	9	3
			1	

b) Nijah

		Th	H	T	O
		4	8	2	6
	+	1	7	8	
		6	6	0	6
		1	1		

Scott

		Th	H	T	O
		4	8	2	6
	+		1	7	8
		5	0	0	4
		1	1	1	

What mistake has the other person made in each calculation?

Talk about it with a partner.

3 Complete the additions.

a)

		Th	H	T	O
		4	7	1	2
	+	3	4	9	2

c) 3,784 + 2,526

b)

		Th	H	T	O
		6	0	7	5
	+		9	4	8

d) 79 + 654 + 1,312

4

$$712 + 394$$

$$1,312 + 2,527$$

$$2,350 + 3,760$$

$$1,995 + 712$$

$$3,044 + 2,372$$

$17 + 953$

No exchange needed	One exchange	More than one exchange

Write one more calculation of your own in each column.

5

The table shows the number of points he gets in each round.

Round	1	2	3
Number of points	3,550	2,175	1,895

a) How many points does Dexter have at the end of Round 2?

[illegible]

b) He needs 8,000 by the end of Round 3 to win the game.

Does Dexter win the game? _____

Show your workings.

[illegible]

6

a)

		Th	H	T	O	
--	--	----	---	---	---	--

a)

		Th	H	T	O
		3	7		9
	+			8	
		6	9	2	5

b)

		Th	H	T	O	
				8	1	
	+		9	8		
		4	2		8	

c) Find two possible answers.

		Th	H	T	O	
		2		1		
	+	3		6		
		6	1	8	2	

		Th	H	T	O	
		2		1		
	+	3		6		
		6	1	8	2	

How did you work this out? Talk about it with a partner.

Are there any more answers?

Subtract two 4-digit numbers – one exchange



1

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

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

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

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

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

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 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 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

5 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 are her workings.

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

Do you agree with Annie? _____

Explain your answer.

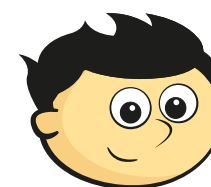


7 A car costs £8,716

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


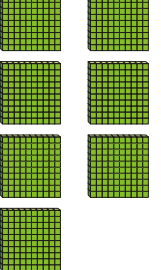

What is the sum of the two numbers?



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.

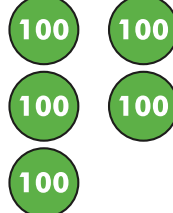
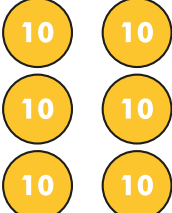
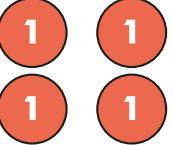
c) Subtract 20 from Kim's number.

d) Subtract 900 from Kim's number.

e) Complete the subtractions.

$$1,702 - 28 = \boxed{} \quad 1,702 - 928 = \boxed{}$$

2 Use the place value chart to complete the subtractions.

H	T	O
		

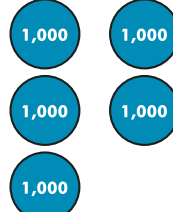
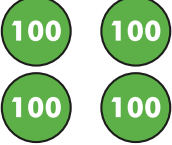
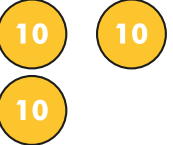
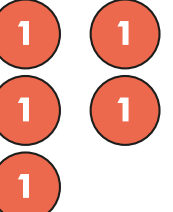
$$\text{a) } 564 - 354 = \boxed{} \quad \text{c) } 564 - 365 = \boxed{}$$

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

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
			

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

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

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

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

What is the same? What is different?

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 two exchanges.
The answer is
less than 2,000

–			

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

–			

c) There are three exchanges.

–			



Add whole numbers with more than 4 digits (column method)

1 Complete the calculations.

a)

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

		2	1	6	4
	+	3	2	1	3

b)

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

		4	2	7	5
	+	2	6	4	3

2 Complete the column additions.

		7	4	3	5
	+	2	4	5	6

		7	4	3	5
	+	2	4	6	6

		7	4	3	5
	+	2	5	6	6

		7	4	3	5
	+	3	5	6	6

What do you notice about each addition?

What stays the same? What changes?

3 Complete the additions. Use the place value chart to help you.

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

a) $23,245 + 14,323 =$

b) $23,245 + 14,328 =$

c) $23,245 + 14,846 =$

d) + $23,245 = 35,490$

4 Use the column method to work out the additions.

a) £36,000 + £19,420

c) 843 cm + 15,611 cm

b) 40,720 g + 6,872 g

d) £17,320 + £6,009 + £34,871

5 The table shows the number of home and away fans attending three football matches.

Match	Home fans	Away fans
1	53,640	12,930
2	42,630	18,340
3	35,480	32,490

Which match had the greatest total attendance?

--

6 Complete the additions.

a)

			4		1	
	+	2		8		4
		8	9	9	2	6

b)

			4		9	
	+	2		8		4
		8	9	9	2	6

7 Complete the additions.

a) 735 + = 1,000

b) 1,026 + = 10,000

c) + 872 = 10,000

8 Mr Hall has written these additions on the board.

324,846 + 12,475

17,654 + 2,935

Dexter's workings

	3	2	4	8	4	6
+		1	2	4	7	5
	3	3	6	2	1	1
				1	1	1

Eva's workings

	1	7	6	5	4
+	2	9	3	5	
	4	7	0	0	4
	1	1	1		

Explain the mistakes that Dexter and Eva have made.



Subtract whole numbers with more than 4 digits (column method)

1

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

Complete the subtractions.

a)

		7	3	1	5
	-	2	1	0	4

c)

		7	3	1	5
	-	5	4	2	0

b)

		7	3	1	5
	-	3	2	4	1

2 Complete the calculations.

a)

		8	4	3	4
	-	2	1	0	4

b)

		£	8	8	2	0	0
	-	£		6	1	0	0



c)

			4	6	8	3	2
	-		1	9	0	2	4

d)

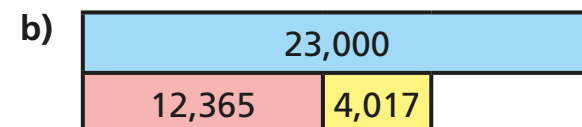
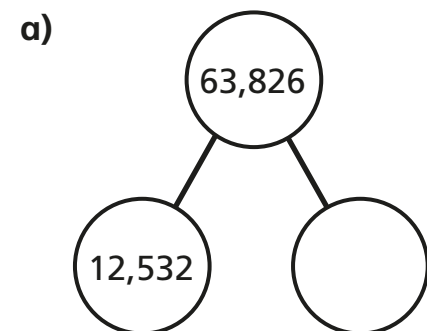
			3	4	5	2	0
	-				6	7	9

3 A family has £22,658 in the bank.
They spend £3,600 on a holiday.
How much money do they have left?

4 It is 10,553 miles from London to Sydney.
It is 9,929 miles from New York to Sydney.
How much further away is Sydney from London than from New York?

 miles

5 Complete the models.



6 Mr Hall has written these subtractions on the board.

$$45,541 - 25,865$$

$$68,945 - 34,758$$

Rosie's workings

2	5	8	6	5
-	4	5	5	4
<hr/>				
2	0	3	2	4

Whitney's workings

6	8	9	4	5
-	3	4	7	5
<hr/>				
3	4	2	1	3

Explain the mistakes that Rosie and Whitney have made.

7 Complete the subtractions.

a) $10,004 - 9,995 =$

b) $10,000 - 6,727 =$

c) $15,923 - 9,998 =$

How did you work this out?

Is there another method you could use?

8 Teddy and Jack are playing a computer game.

Teddy scores 55,890 points.

Jack scores 36,475 points fewer than Teddy.

a) How many points does Jack score?

b) How many points do they have altogether?

9 Here are some digit cards.



Ron makes a 4-digit number with the cards.

Eva makes a 4-digit number with the cards.

The difference between their numbers is between 1,000 and 3,000

What numbers could Ron and Eva have made?

Round to estimate and approximate

- 1 Rosie is working out $2,937 + 1,870$
Rosie rounds each number to the nearest 1,000 to estimate the answer.

Complete the sentences.

2,937 rounded to the nearest 1,000 is

1,870 rounded to the nearest 1,000 is

Rosie's estimate for the answer is

+ =

Complete the column addition to work out the actual answer.

		2	9	3	7	
	+	1	8	7	0	

The actual answer is

- 2 Round each number to the nearest 10,000 to estimate the answer to the calculations.

a) $12,063 + 29,580$ + =

b) $47,640 - 9,485$ - =

- 3 Annie works out $7,320 + 912$



Use approximations to show that Annie is incorrect.

- 4 Complete the calculations.

Use approximations to check your answers.

a) $3,845 \text{ km} + 7,006 \text{ km} =$

b) $873 + 9,618 =$

c) $79,382 - 8,716 =$

d) $£12,005 + £3,978 - £6,172 =$

- 5 The table shows the number of people of different ages living in three towns.

	Town A	Town B	Town C
Under 16	3,765	8,283	10,301
16 to 65	35,835	14,100	24,554
Over 65	1,949	9,821	656

Estimate which town has got the greatest population.

Town ____ has the greatest population.

- 6 Are these statements correct? How do you know?

a) $29,999 - 9,999 = 30,000 - 10,000$

b) $17,550 + 10,570 > 17,550 + 9,985$

c) $17,990 + 75,980 - 17,990 = 12,975 + 75,980 - 12,975$

- 7 Mo has made a mistake with this calculation.

$$\begin{array}{r} 6 \text{ } ^{13} \text{ } ^{12} \\ 1 \text{ } \cancel{7} \text{ } \cancel{4} \text{ } \cancel{3} \text{ } ^{12} \\ - \quad 8 \text{ } 4 \text{ } 8 \text{ } 7 \\ \hline 1 \text{ } 8 \text{ } 9 \text{ } 4 \text{ } 5 \end{array}$$

Use rounding and approximating to show how you know.

- 8 Mr Khan writes this question on the board.

$$7,395 - 711$$

Dexter's estimate is $7,000 - 1,000 = 6,000$

Whitney's estimate is $7,400 - 700 = 6,700$

Whose estimate do you agree with? _____

Explain your answer.

Work out the actual answer.

Whose estimate was the closest? _____

Talk about it with a partner.

$$320 + 719 = 1,039$$

1,039 – 320

$$4,096 - 2,356 = 1,740$$
$$1,740 + 4,096$$
$$\begin{array}{r} 12350 \\ + 7903 \\ \hline 91380 \end{array}$$

What calculation should he do? Correct Tommy's answer.

A 10x5 grid with a black rectangle on the right side. The rectangle is 2 units high and 4 units wide, located in the bottom right corner of the grid.

5 Match the inverse calculations.

$$2,482 + 6,428 = 8,912$$

$$5,271 + 4,212 = 9,483$$

$$5,984 - 3,172 = 2,812$$

$$8,912 - 6,428 = 2,482$$

$$9,483 - 5,271 = 4,212$$

$$8,912 - 5,271 = 3,641$$

$$8,912 = 3,641 + 5,271$$

$$5,984 = 3,172 + 2,812$$

6 Complete the calculations.

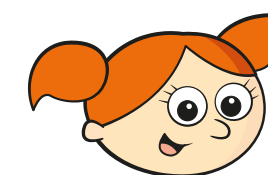
Use inverse operations to check your answers.

a) $763 + 4,072 =$

b) $8,711 - 1,053 =$

c) $2,351 + 14,706 =$

7 Alex thinks of a number.

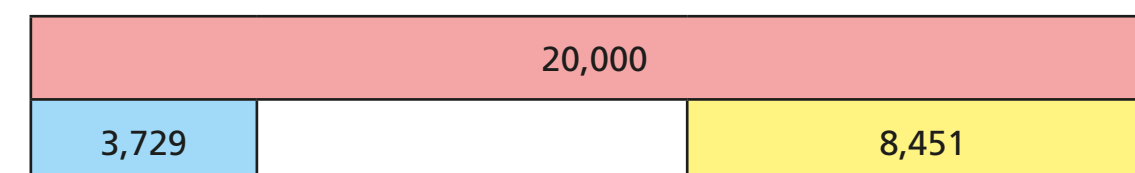


When I add
4,550 to my number
I get 7,460

What number did Alex start with?

Page 10

8 Here is a bar model.



Think of two different ways that you can find the missing part.

What is the missing part?

Page 10

Multi-step addition and subtraction problems

- 1 Eva is reading a book before bedtime.
On Monday she reads 38 pages.
On Tuesday she reads 6 pages more than she did on Monday.

a) How many pages does she read on Tuesday?

b) How many pages does she read altogether on Monday and Tuesday?

c) There are 123 pages in the book altogether.
How many pages does Eva have left to read?

- 2 Here are two number cards.

800

?

The sum of the two cards is 2,900

What is the difference between the two cards?

- 3 Mo has £1,000 to spend. He buys a TV and a games console.



Does Mo have enough money left to buy the phone? _____

Show your workings.

- 4 Two families each have £1,800

The table shows how much they need to spend.

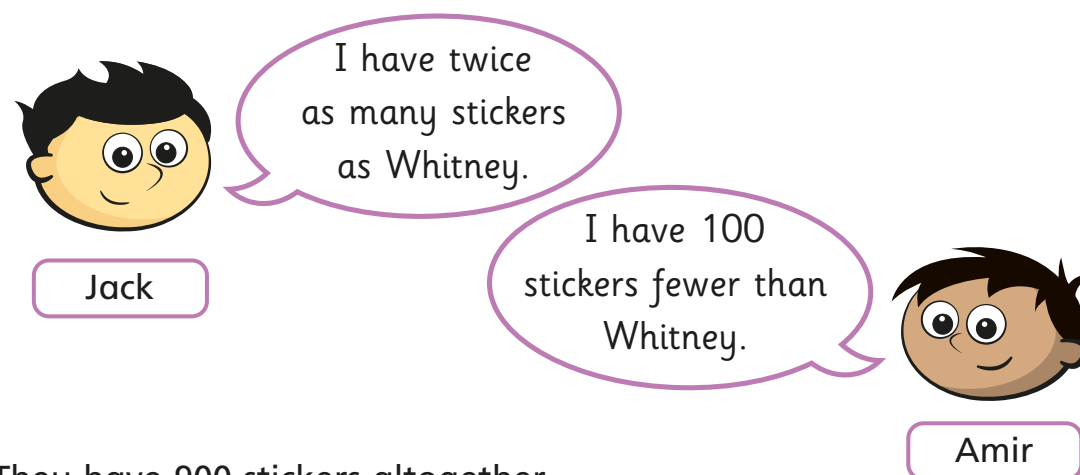
	The Websters	The Changs
Housing	£465	£550
Food	£420	£380
Bills	£120	£135

Which family has the most money left?

How much more money do they have?

- 5 There are 15,600 people at a concert.
There are 9,050 adults.
The rest are children.
How many more adults than children are there?

- 6 Jack, Whitney and Amir are counting their sticker collections.



They have 900 stickers altogether.
How many stickers do they each have?

Jack has stickers.

Amir has stickers.

Whitney has stickers.

- 7 Two numbers have a difference of 1,200 and a total of 6,484
What are the two numbers?

 and

- 8 Three 4-digit numbers add together to make 10,000
One of the numbers is 2,560
Complete the sentences to describe the other numbers.

The total of the two numbers must be

The two numbers could be and

One of the numbers cannot be greater than

Write your own problem like this for a partner to solve.
