Year 3 Maths Home Learning w/c: 16-11-20

Monday –

Adding a 3-digit number and 10s

Discover

1 a) The birch tree is 10 years older than the beech tree.

The horse chestnut is 20 years older than the beech tree.

Use addition to work out their ages.

b) Represent the addition for the horse chestnut on a number line.

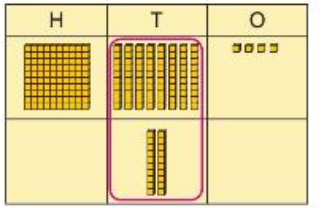
Share

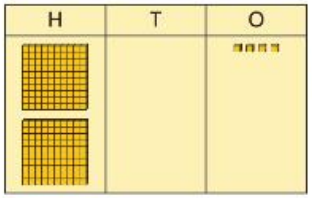
a) 184 + 10 can be solved like last lesson but 184 + 20 is different.

8 tens + 1 ten = 9 tens

184 + 10 = 194

The birch tree is 194 years old.

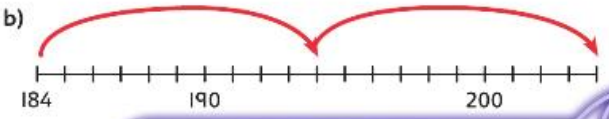




184 + 20 = 204

The horse chestnut tree is 204 years old.

b)



184 + 10 = ?

I can add the 10s.

184 + 20 = ?

I will add the 10s.

8 tens + 2 tens = 10 tens

There are 10 tens. I don't think 1,104 is correct.

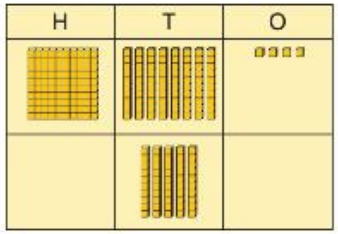
Exchange 10 tens for 1 hundred.

I wonder if I could add 16 and then add 4? But that wouldn't be as clear as adding 2 tens.

Think together

1 The oak tree is 50 years older than the beech tree.

How old is the oak tree?

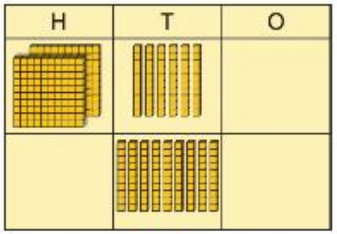


184 + 50 = ☐

The oak tree is ☐ years old.

2 A giant redwood tree is 260 years old.

How old will it be in 90 years?



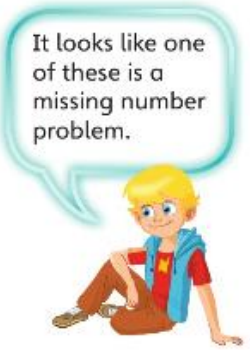
260 + 90 = ☐

The giant redwood will be ☐ years old.

3 A cypress tree is 385 years old.

Complete the information in the table.

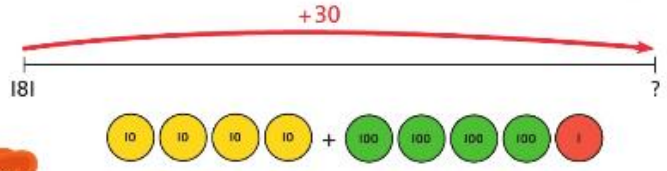
Time	Calculation	Age of tree
Present day	385 + 0	☐ years
30 years from now	385 + 30	☐ years
60 years from now	385 + ☐	☐ years
☐ years from now	385 + ☐	475 years

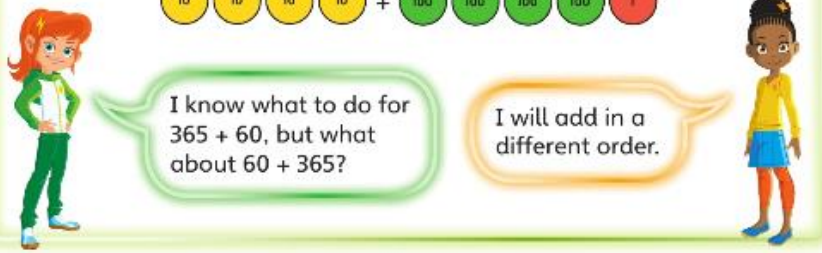


4 For which of these calculations do you need to exchange 10 tens for 1 hundred?

CHALLENGE

60 + 365 = ?





→ Practice book 3A p57

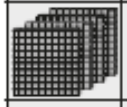
→ Textbook 3A p76

Adding a 3-digit number and 10s

1 There are 475 people already visiting the castle.

The coach brings 50 more people.

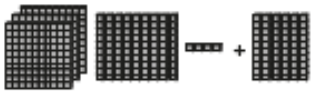
How many people are visiting the castle now?

H	T	O
		
		

475 + ☐ = ☐

There are ☐ people visiting the castle now.

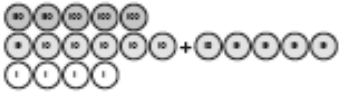
2 Richard is using drawings and place value equipment to solve these calculations. Complete his additions.

a) 

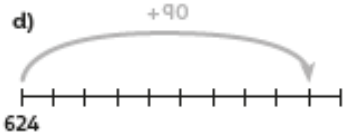
☐ + ☐ = ☐

b) 4 8 0 + 1 2

☐ + ☐ = ☐

c) 

☐ + ☐ = ☐

d) 

☐ + ☐ = ☐

3 Complete the missing numbers.

a) 234 + 90 = ☐

b) 371 + 50 = ☐ + 60

c) ☐ = 40 + 569

d) 20 + ☐ = 319

e) 50 more than 762 is ☐

f) 150 = ☐ + 90

4 What mistake has Isla made?

80 + 538
8 tens + 3 tens = 11 tens
80 + 538 = 518

Isla

5 Solve these additions.

a) 294 + 70 = ☐

b) ☐ = 90 + 326

c) 284 + 80 = ☐

d) ☐ = 70 + 346

e) 274 + 90 = ☐

f) ☐ = 50 + 366

Explain any patterns that you noticed.

6 Complete each addition to match each answer shown on the number line.

CHALLENGE

4			+		0	4	9		+		0

500 600

	7		+		0	4			+		0

I can find more than one addition for some calculations.

Reflect

When I add a 3-digit number and tens, I know I will need to exchange 10 tens for 1 hundred if

Tuesday –

Subtracting 10s from a 3-digit number

Discover

1 **a)** Jen has 210 m of dinosaur fabric to sell.

How much is left after she sells 20 m?

b) Jen sells some more dinosaur fabric. Now she has 140 m left.

How much did she sell?

Share

a) 210 – 20 = ?

H	T	O

I will try subtracting the tens.

20 – 10 = 10

So is the answer 210 m left?

That can't be correct; that's what I started with.

You have to exchange 1 hundred for 10 tens.

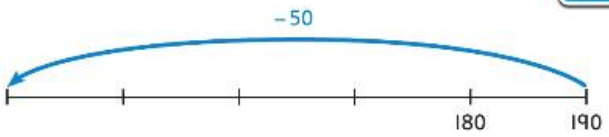
11 tens – 2 tens = 9 tens

210 – 20 = ☐

Jen has 190 m of dinosaur fabric left.

H	T	O

b) 190 – ☐ = 140

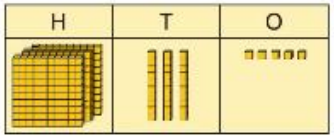


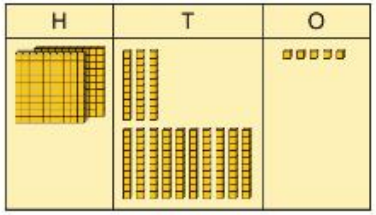
Jen has sold 50 m more dinosaur fabric.

Think together

1 Jen has 335 m of space fabric and sells 50 m.

How much is left?





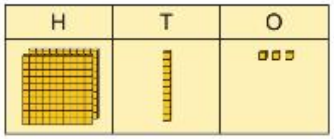
☐ tens – ☐ tens = ☐ tens

335 – 50 = ☐

There is ☐ m of space fabric left.

2 Toshi has 80 m of bee fabric to sell. Jen has 213 m of bee fabric to sell.

How much more bee fabric does Jen have than Toshi?

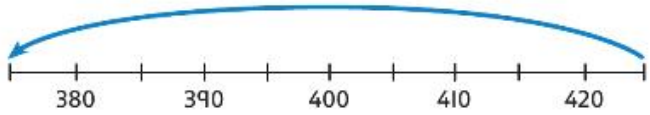


I think this is a find the difference. I can use subtraction.

213 ○ 80 = ☐ m

Jen has ☐ m of bee fabric more than Toshi.

3 What calculation does the number line show?



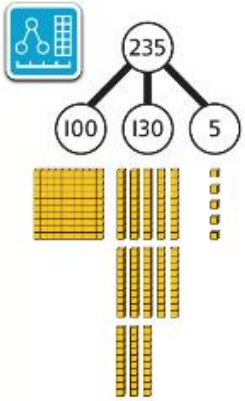
425 ○ ☐ = ☐

CHALLENGE

4 Flo is trying to solve 235 – 60.

Flo has represented her exchange using a part-whole model.

Explain the calculation and the method used here.



My part-whole model is a different way of showing 235.

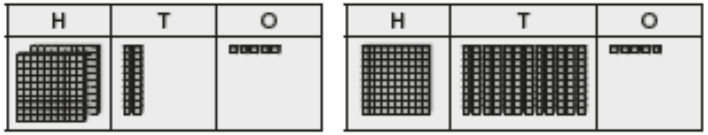
Think of your own word problem to go with this calculation.

→ Practice book 3A p60

→ Textbook 3A p80

Subtracting 10s from a 3-digit number

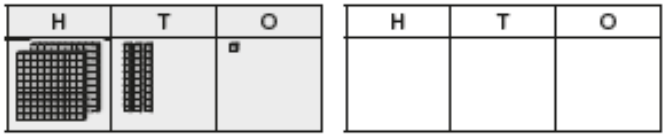
1 a) Lucas's book has 225 pages. He has read 70 pages.
How many pages does he have left to read?



12 tens – ☐ tens = ☐ tens

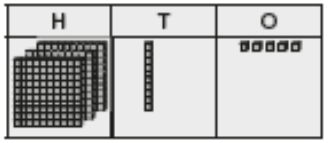
225 – 70 = ☐ Lucas has ☐ pages left.

b) Sara's book has 231 pages. She has 60 pages left to read.
How many has she already read?



231 – 60 = ☐ Sara has ☐ pages left.

c) George has read 80 pages. His dad has read 315 pages.
How many more pages has his dad read than George?

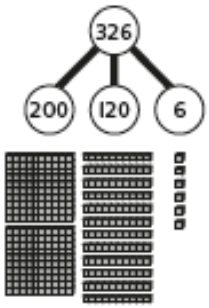


315 ◯ ☐ = ☐

George's dad has read ☐ more pages.

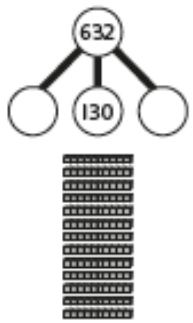
2 Complete the part-whole model and missing base 10 equipment.
Then complete the calculations.

a)



326 – 60 = ☐

b)



632 – 80 = ☐

3 Find the missing numbers.

30 less	Number	30 more
	215	245
	316	
		300

4 Complete the calculations.

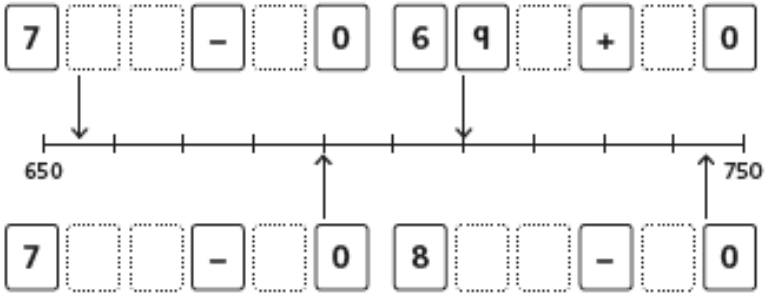
a) 340 – 60 = ☐

b) ☐ = 821 – 70

c) 350 – 60 = ☐

d) ☐ = 831 – 70

5 Complete the calculations to match each answer shown on the number line.



6 Reena thinks of a number. She adds 90, then adds 80, then adds 70. She finishes on a number with the digits 1, 2 and 3. What numbers could she have started on?

CHALLENGE

Reflect

I know 15 – 8 so I can work out 251 – 80 by

Wednesday –

Adding and subtracting a 3-digit and a 2-digit number

Discover

1 **a)** Holly drives from Leicester to Bath. She then drives to Weston-super-Mare.

How many miles is Holly's total journey?

b) She has driven 11 miles from Leicester.

How far left to Bath?

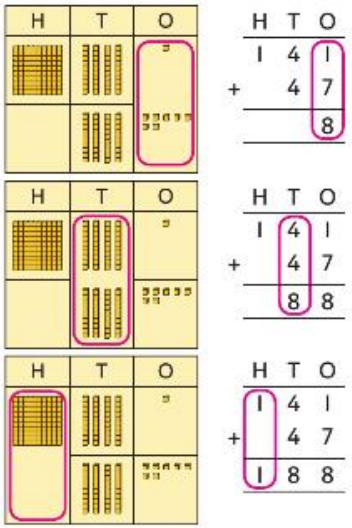
Share

a) Now we are adding 10s **and** 1s.

First we add the 1s.

Then we add the 10s.

Then we add the 100s.



H	T	O
1	4	1
+	4	7
		8

H	T	O
1	4	1
+	4	7
	8	8

H	T	O
1	4	1
+	4	7
1	8	8

141 + 47 = 188

Holly's journey is 188 miles in total.

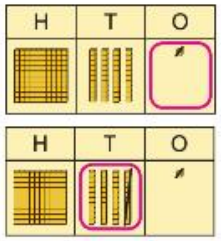
b) It is 141 miles from Leicester to Bath. Holly has travelled 11 miles.

First subtract 1 from the ones.

Then subtract 1 ten.

141 – 11 = 130

It is still 130 miles to Bath.



Think together

1 Jack has already driven 74 miles on the way to Cardiff from Norwich.

How much of the journey is left?

H T O

_____

_____

There are ☐ miles left of the journey.

2 Kay has driven 21 miles already.

How much of the journey is left?

H	T	O
▦	▮▮▮	▫▫▫

H T O

_____

– 2 1

_____

☐ – 21 = ☐

☐ miles are left.

3 How far is the total journey?

H T O

_____

_____

The total journey is ☐ miles.

4 Discuss the different methods you would use to solve these calculations.

CHALLENGE

130 + 51	609 – 7	48 + 431	234 + 52
891 – 60	938 – 26	205 + 50	

I would write columns

I would solve mentally

I would check using equipment

I can do some of these mentally.

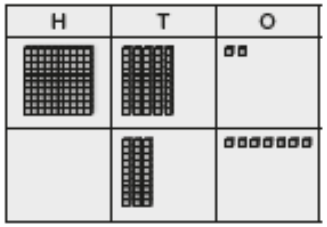
I would check using equipment or write the calculation down.

→ Practice book 3A p63

→ Textbook 3A p84

Adding and subtracting a 3-digit and a 2-digit number

1 a) On Monday a postman delivered 152 letters. On Tuesday he delivered 37 letters. How many letters did he deliver in total?

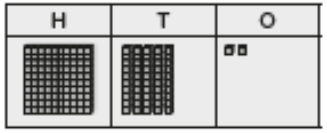


	H	T	O
	1	5	2
+			

152 + 37 = ☐

He delivered ☐ letters in total.

b) On Friday, the postman delivered 41 fewer letters than on Monday. How many letters did the postman deliver on Friday?

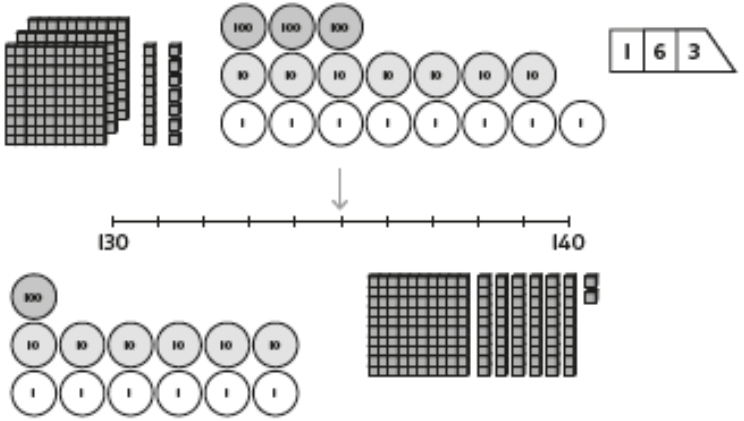


	H	T	O
−			

152 − ☐ = ☐

He delivered ☐ letters on Friday.

2 Match the calculations to the pictures.
Which one does not have a matching picture?



196 − 33 | 378 − 61 | 101 + 34 | 41 + 125

33 + 342 | 399 − 21 | 177 − 15

3 Complete the calculations. Invent another for the pattern in each column.

111 + 11 = ☐	123 + 11 = ☐	987 − 11 = ☐
111 + 22 = ☐	123 + 22 = ☐	987 − ☐ = 965
111 + 33 = ☐	123 + ☐ = 156	987 − ☐ = 954
111 + 55 = ☐	123 + ☐ = 178	☐ − 55 = 932
☐ + ☐ = ☐	☐ + ☐ = ☐	☐ − ☐ = ☐

4 Complete the calculations.

H	T	O
1	5	3
+	4	2

☐ ○ ☐ = ☐

H	T	O
8	5	8
−	3	5

☐ ○ ☐ = ☐

5 Fill in the missing digits and write the calculations in full.

CHALLENGE

H	T	O
	7	
+		4
2	9	6

☐ ○ ☐ = ☐

H	T	O
6		8
−		3
	4	6

☐ ○ ☐ = ☐

Reflect

Convince your partner that 453 + 41 = 494 and 453 − 41 = 412

Thursday -

Adding a 3-digit and a 2-digit number

Discover

1 a) Zoe buys a large fish tank and a pump.
How much does Zoe spend altogether?

b) Aaron buys a zebrafish and a clownfish.
How much does this cost in total?

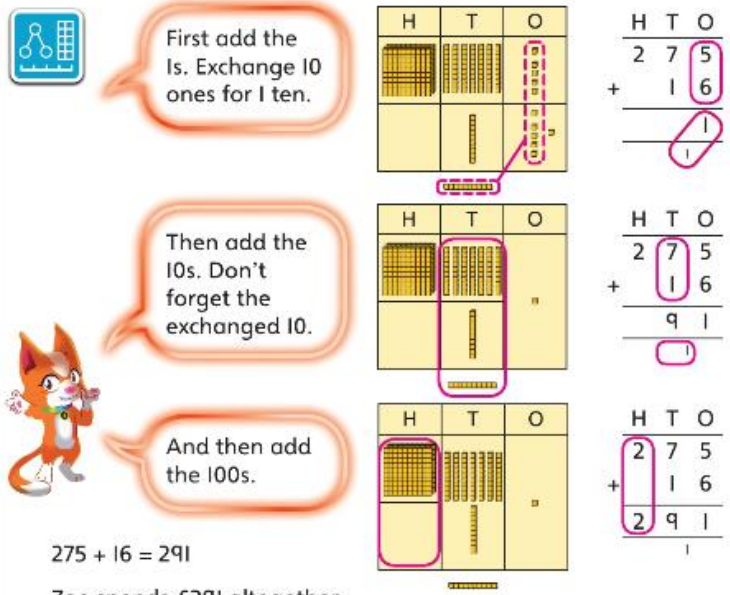
Share

a)

First add the 1s. Exchange 10 ones for 1 ten.

Then add the 10s. Don't forget the exchanged 10.

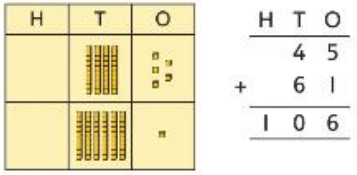
And then add the 100s.



275 + 16 = 291

Zoe spends £291 altogether.

b) 45 + 61 = 106

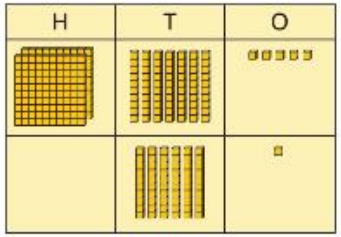


The zebrafish and the clownfish cost £106 in total.

Think together

1 Tia buys a large fish tank and a clownfish.

How much does she spend?

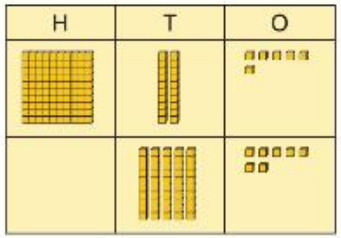


	H	T	O
	2	7	5
+		6	1

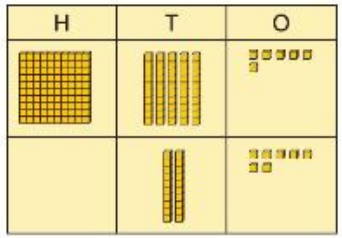
275 + 61 = ☐

Tia spends £☐ in total.

2 Solve these additions: 126 + 57 and 156 + 27.
What do you notice? Can you explain?



	H	T	O
	1	2	6
+		5	7



	H	T	O
	1	5	6
+		2	7

3 Mark and Poppy wanted to write their additions in columns.

What mistakes did they make?

Mark's addition

	H	T	O
	1	5	4
+		7	2
	1	2	6

Poppy's addition

	H	T	O
	1	6	4
+		2	7
	1	8	11

4 How many different additions can you make using these cards?

CHALLENGE

3	3	3	8	8

			+		

Do any of your calculations add to the same total? Explain why.

Now I can solve any addition with 3 digits and 2 digits.

I will make up some additions where you exchange for both 10s and 100s.

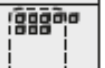
→ Practice book 3A p66

→ Textbook 3A p88

Adding a 3-digit and a 2-digit number

1 a) The other sunflower is 23 cm taller.

What is its height?

H	T	O
		
		

H	T	O
1	6	8
+	2	3

168 cm tall

168 + 23 = ☐

The other sunflower is ☐ cm tall.

b) A sunflower is 183 cm tall. It grows 51 cm taller. How tall is it now?

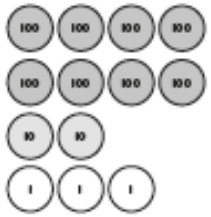
H	T	O
		
		

H	T	O
1	8	3
+		

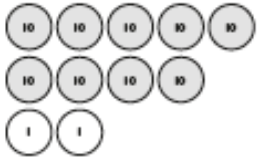
183 + ☐ = ☐

Now it is ☐ cm tall.

2 Complete this addition.



+



H	T	O
+		

3 Sort the calculations into three groups.

238 + 71	827 + 31	712 + 38	327 + 18
318 + 72	731 + 28	73 + 182	28 + 137

No exchange	Exchange 10 ones	Exchange 10 tens

4 Complete these additions.

a)

H	T	O
2	5	8
+	4	7

c)

H	T	O
3	0	3
+	1	7

e)

H	T	O
5	2	5
+	7	6

b) 188 + 13 = ☐

d) 50 + 672 = ☐

f) ☐ = 39 + 461

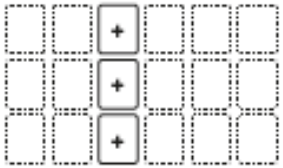
5 Find the missing digits.

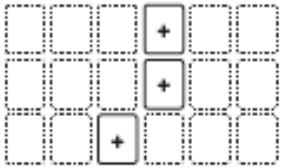
a) 3 ☐ 5 + 6 ☐ = 416

b) 35 ☐ + ☐ 2 = 416

6 Use each number once. Write additions so that they all have to exchange 10 ones and 10 tens.

CHALLENGE





I chose the six pairs by

_____

_____

Reflect

Explain how to add a 3-digit and a 2-digit number in three steps.

Step 1: _____

Step 2: _____

Step 3: _____

Friday –

Subtracting a 2-digit number from a 3-digit number

Discover

1 a) How many new trees survived?

Luis worked it out this way. What mistake did he make?

	H	T	O
	1	7	5
−		3	8
	1	4	3

7 tens − 3 tens = 4 tens
8 ones − 5 ones = 3 ones.
So 175 − 38 = 143.

Luis

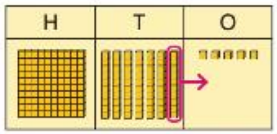
b) What is the correct answer?

Share

a)

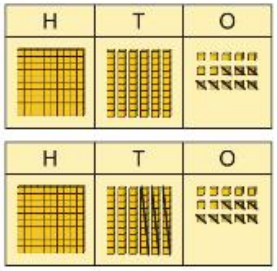
Luis has subtracted the Is in the wrong order.

Luis should subtract 8 ones. He needs to exchange a ten.



b) 175 − 38 = ☐

You should first subtract 8 ones.
Then subtract 3 tens.



I will write it as columns. I wonder how to show the exchange of I ten.

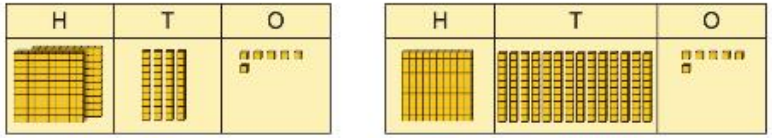
	H	T	O
	1	6	15
−		3	8
	1	3	7

175 − 38 = 137

Think together

1 Next autumn, they plant 246 new trees. 63 of them are blown down.

How many are left?



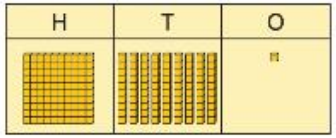
246 – 63 = ☐

☐ trees are left.

	H	T	O
	2	4	6
–		6	3

2 They planted 55 oak trees and 191 birch trees.

How many more birch did they plant?

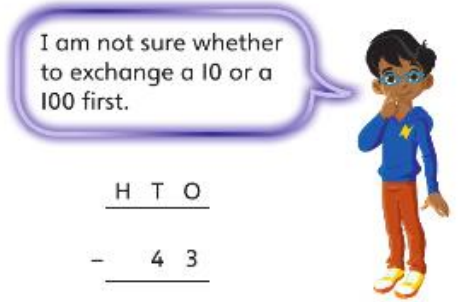


	H	T	O
–		5	5

They planted ☐ more birch trees.

3 How many more plum than apricot trees did they plant in the orchard?

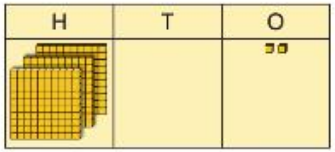
Trees	Number planted
Apricot	43
Plum	221
Apple	302
Walnut	65



	H	T	O
–		4	3

4 Flo is trying to work out 302 – 65 to find how many more apple than walnut trees have been planted.

I need to exchange a ten, but 302 has 0 tens.



What should Flo do to solve the subtraction?

You can check by doing an addition.

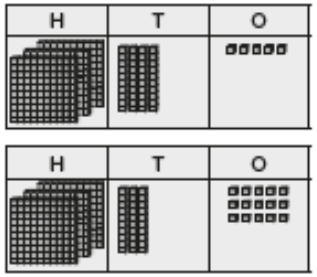
→ Practice book 3A p69

→ Textbook 3A p92

Subtracting a 2-digit number from a 3-digit number

1 There are 345 children at school on Thursday.

a) A minibus takes 27 children on a trip. How many children are left in school?

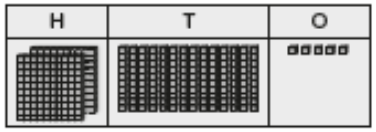


H	T	O
3	4	5
–	2	7

345 – 27 = ☐

There are ☐ children left in school.

b) On Friday there are 345 children at school. 54 children have packed lunch. The rest have school dinners. How many school dinners is that?



H	T	O
–	5	4

345 – 54 = ☐

☐ children have school dinners.

2 Find 66 less than each number shown.

a)

H	T	O
	3	4	7
–	6	6	

b)

H	T	O
	4	5	6
–	6	6	

3 Complete these subtractions.

a)

H	T	O
1	7	3
–	4	5

b) 231 – 62 = ☐

c)

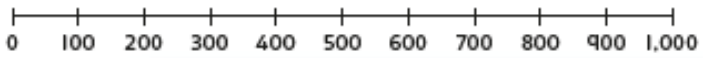
H	T	O
2	6	0
–	7	6

d) 988 – 99 = ☐

4 Use each digit card once to make a subtraction. Find five different solutions and mark the results on the number line.

2	2	2	5	9

☐ ☐ ☐ – ☐ ☐



5 Find and correct the mistake in the subtraction.

157 – 38 = ☐

	H	T	O
	1	5	7
–		3	8
	1	2	1

	H	T	O
–		3	8

6 Crack the code. Each symbol represents one digit.

CHALLENGE

	H	T	O
	▲	■	▲
–		▲	■
	■	▲	1

■ = ☐

▲ = ☐

Reflect

There have been ten lessons in this unit. Think about what you learnt.
What are the three most important things to remember?

1. _____
2. _____
3. _____

My favourite lesson was _____