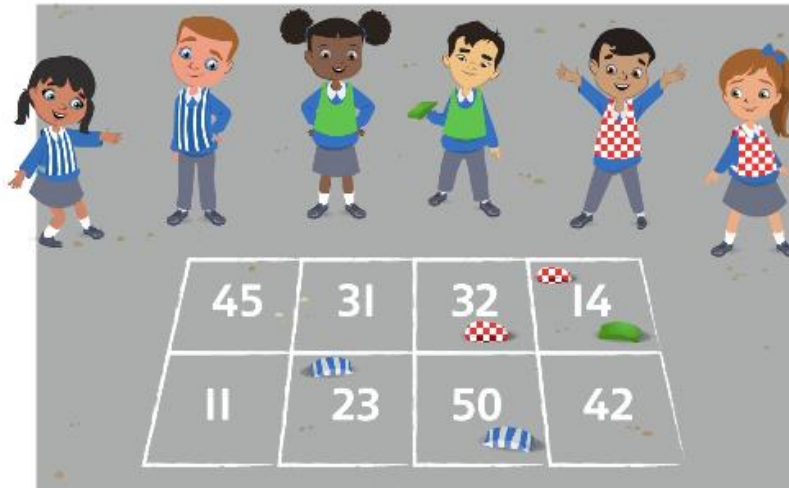


Year 3 Maths Home Learning w/c: 19-10-20

This week, we will begin learning a new written method for addition and subtraction: the column method. As Power Maths is a new scheme we have introduced this year, the children will not have been introduced to this method in school so we will begin with the Year 2 lessons this week and progress to the Year 3 lessons after half term. The Year 2 lessons focus on adding and subtracting 1 and 2 digit numbers and the Year 3 is adding and subtracting 2 and 3 digit numbers.

Adding two 2-digit numbers 1

Discover



- 1 a) What is the total score for the team wearing red checks?
- b) The plain green team scores 10 more than the red checks.
Where does the other plain green land?

Share

a)

Tens	Ones
30	2
10	4
+	
40	6

$$\begin{array}{r} \text{T O} \\ 32 \\ + 14 \\ \hline \end{array}$$



I added the ones first and then added the tens.



Tens	Ones
30	2
10	4
+	
40	6

$$\begin{array}{r} \text{T O} \\ 32 \\ + 14 \\ \hline 46 \end{array}$$

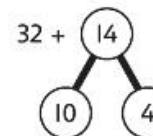
Tens	Ones
40	6
+	
30	2
10	4

$$\begin{array}{r} \text{T O} \\ 32 \\ + 14 \\ \hline 46 \end{array}$$

I started with 32, added 10 and then added 4.



$$32 + 14 = 46$$




$$32 + 10 = 42$$

$$42 + 4 = 46$$


The red checks score 46 points in total.

b) $14 + 42 = 56$




The other plain green  lands on 42.

Think together



- 1 The blue striped team throw one  on 23 and one on 50.


What total score does the blue striped team get?

Tens	Ones
	
	

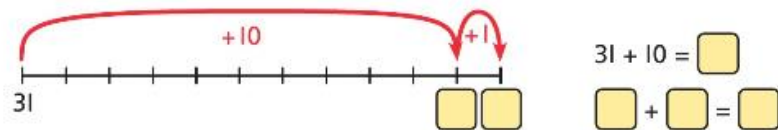
T	O	
5	0	
+		2 3
—		—

$50 + 23 = \square$

The total score is \square .

- 2 Two  are thrown. One lands on 31 and one on 11.

What score does this make?



The total score is \square .

- 3 One  lands on 32 and the other lands on 11.

What score does their team get?

Tens	Ones

T	O	
3	2	
+		1 1
—		—



$32 + 11 = \square$

$32 + \begin{array}{c} \text{11} \\ \diagdown \quad \diagup \\ \circ \quad \circ \end{array} = \square$

$\square + \square = \square$

The total score is \square .



I drew a  to represent ten.
I drew a  to represent one.

I think I could use the answer to Question 2 for help.



Adding two 2-digit numbers 1

- 1 a) There are 35 red balloons. There are 53 green balloons.
How many balloons are there in total?

Tens	Ones
+	
<input type="text"/>	<input type="text"/>

T	O
3	5
+	5 3
<input type="text"/>	<input type="text"/>

 $35 + 53 = \square$

There are balloons in total.

- b) There are 17 giraffes. There are 41 monkeys.

How many animals are there in total?

 $41 + 17 = \square$

$41 + 10 = \square$
 $\square + \square = \square$

There are animals altogether.

- 2 Complete the number bonds.

a)

Tens	Ones
<input type="text"/>	<input type="text"/>
+	<input type="text"/>
<input type="text"/>	<input type="text"/>

T	O
6	3
+	2 4
<input type="text"/>	<input type="text"/>

b)

Tens	Ones
<input type="text"/>	<input type="text"/>
+	<input type="text"/>
<input type="text"/>	<input type="text"/>

T	O
2	8
+	5 1
<input type="text"/>	<input type="text"/>

- 3 Complete the additions.

a) $12 + 13 = \square$

d) $\square = 38 + 11$

b) $12 + 14 = \square$

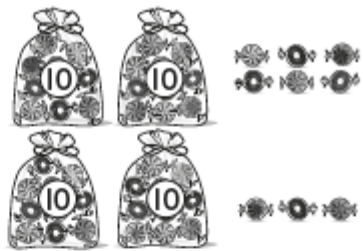
e) $\square = 48 + 11$

c) $\square + 14 = 27$

f) $79 = \square + 21$

4 Ada has 26 .

Sid has 23 .



	Tens	Ones
+		

$$\begin{array}{r} \text{T} \quad \text{O} \\ \hline 2 \quad 6 \\ + 2 \quad 3 \\ \hline \square \quad \square \end{array}$$

They have  in total.

5 What digits could go in the boxes?

$$\square 7 + \square 2 = 89$$

CHALLENGE

Reflect

- To work out $25 + 62$, I would _____
- _____
- _____
- _____

Tuesday -

Adding two 2-digit numbers 2

Discover

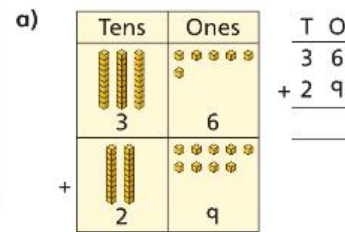


1 a) How many points did Asha score in total?

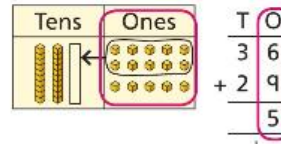


b) Sol throws one more . He scores 50 in total. Where does his other land?

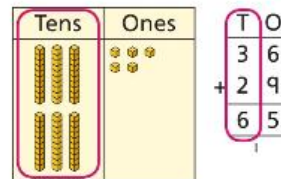
Share



$$\begin{array}{r} \text{T O} \\ 36 \\ + 29 \\ \hline \end{array}$$

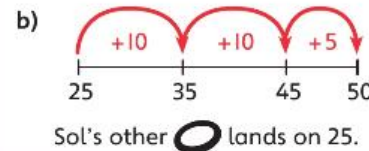


$$\begin{array}{r} \text{T O} \\ 36 \\ + 29 \\ \hline 65 \end{array}$$



$$\begin{array}{r} \text{T O} \\ 36 \\ + 29 \\ \hline 65 \end{array}$$

Asha scored 65 points in total.



I know that 6 ones and 9 ones is 15 ones. I can exchange 10 ones for one ten. So 15 ones is the same as 1 ten and 5 ones.



You could also use a number line to do this.

Think together



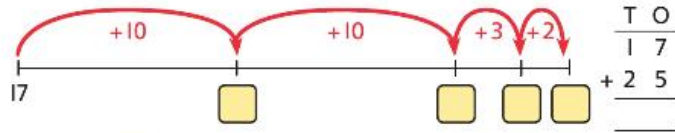
- 1 Asha now scores 36 and Sol scores 25.
What is the total score?



Tens	Ones	T	O
		3	6
		2	5
		—	—

The total score is .

- 2 One lands on 17 and one lands on 25.
What is the total score?



$17 + 20 = \square$

$\square + 3 = \square$

$\square + 2 = \square$

The total score is .

- 3 One lands on 17 and one lands on 29.
What is the total score?



Tens	Ones	T	O
		1	7
		+	2
		—	—

$17 + 29 = \square$


The total score is .

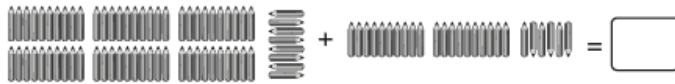
I will use a number line. I will start counting from 29.



Can I use $17 + 25$ to help solve $17 + 29$?



Adding two 2-digit numbers 2

1 a) How many  are there?



Tens	Ones
	
+	
<input type="text"/>	<input type="text"/>



 =

There are .


T	O
6	8
+	
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

b) How many  are there?



Tens	Ones
	
+	
<input type="text"/>	<input type="text"/>



There are .


45
  =

79

2 Complete the .




3 Jim has 53 green  and 46 red .

How many  does he have in total?



Jim has  in total.

I think I can use the first sum to work out the rest of the answers.

4 $17 + 15 = \square$ 

$18 + 15 = \square$

$19 + 15 = \square$

$15 + 17 = \square$

$15 + 16 = \square$

$28 + 30 = \square$

$38 + 30 = \square$

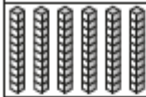

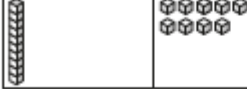
$48 + 30 = \square$

$48 + 29 = \square$



80

5 Find the total.

Tens	Ones
	
+	

6 The numbers on the cards add to make 42.
One of them is more than 3 and less than 10.
What could the numbers be?



Is there more than one solution?



Reflect

- I can add 35 and 18 by _____
- _____
- because _____
- _____
- _____

Wednesday -

Subtracting a 2-digit number from another 2-digit number 1

Discover



- 1 a) How many eggs are left after Omar bakes a cake?
- b) Omar breaks 20 eggs.
How many eggs are left now?

Share

I will start with the greatest number.

a)

T	O
40	5
- 10	2
<hr/>	
30	3

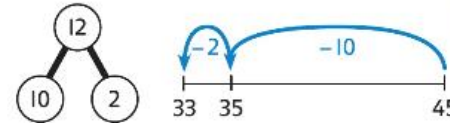
T	O
4	5
- 1	2
<hr/>	
3	3

T	O
4	5
- 1	2
<hr/>	
3	3

I could try crossing out 12 eggs: 10 and 2.

$$45 - 12 = 33$$

There are 33 eggs left.



I used a number line.

b)

Tens	Ones
30	3
- 20	0
<hr/>	
10	3

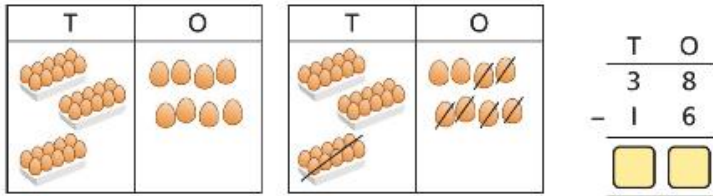
T	O
3	3
- 2	0
<hr/>	
1	3

There are 13 eggs left.

Think together

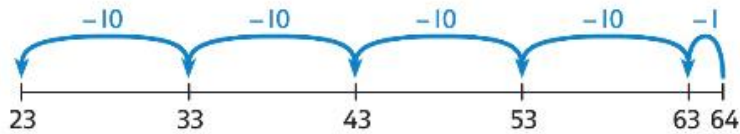


- 1 There are 38 eggs. Harry uses 16 eggs.
How many eggs are left?



$$38 \text{ eggs} - 16 \text{ eggs} = \square$$

- 2 Eva has 64 eggs. She uses 41 eggs.
How many eggs does she have left?

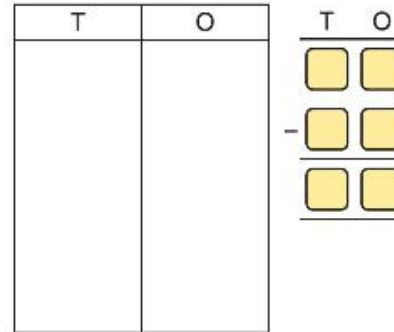


$$64 - 41 = \square$$

Eva has eggs left.



- 3 Alfie has 74 eggs. He gives 41 eggs to Rosie.
How many are left?



$$74 - 41 = \square$$



Do we always start with ones for subtraction?

Should we use the same method for subtraction, or change it?



Subtracting a 2-digit number from another 2-digit number 1



1 $58 - 23 =$

Tens	Ones
	

$58 - 23 =$

2 Use  to show:

a) $86 - 15 =$

Tens	Ones
	

T	O	
8	6	
-	1	5

b) $36 - 16 =$

Tens	Ones

T	O	
3	6	
-	1	6

c) $62 - 41 =$

Tens	Ones

T	O	
6	2	
-	4	1

3 Maryam starts with 62 grapes.

She eats 20 grapes.

She has left.

Tens	Ones

4 Work out:

a) $35 - 11 =$

d) $56 - 12 =$

b) $45 - 11 =$

e) $66 - 12 =$

c) - 11 = 34

f) $76 -$ = 54



Can you see a connection between the questions?

- 5 Stella had 36 sweets.
She gave some to Ravi
and has 12 left.
How many sweets did
Stella give to Ravi?

$$36 - \square = 12$$



- 6 What 2-digit numbers
could go in each box?

$$29 - \square = 39 - \square$$

CHALLENGE



I think I see something similar
about the missing numbers.



Reflect

$$65 - 32 = 44$$




Is this calculation correct? How do you know?

- _____
- _____
- _____
- _____

Subtracting a 2-digit number from another 2-digit number ②

Discover



- 1 a) How many points is the  team winning by?
- b) The  team does not score again and wins by 15 points.
How many points will the  team have at the end?

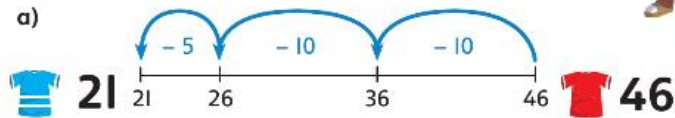
Share



I subtracted tens first, so the ones stayed the same.



I worked out the numbers in the jumps.

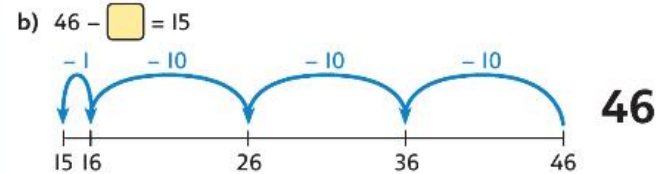


$$46 - 21 = 25$$

25 is the **difference** between 46 and 21.

The team in plain red shirts is winning by 25 points.

You could count on instead of counting back.




$$46 - 31 = 15$$

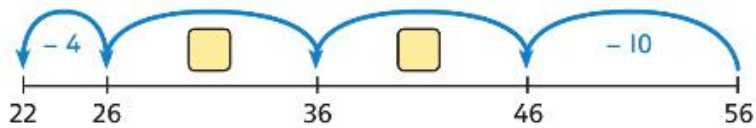
The team in striped blue shirts will have 31 points.

Think together



- 1 How many more points does  have?
What is the difference between the scores?

	22
	56

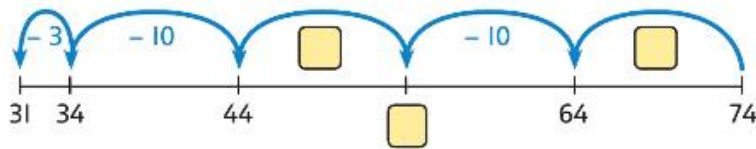


$$56 - 22 = \square$$

\square is the difference between the scores.

- 2 What is the difference between the scores?

	74
	31





$$74 - 31 = \square$$

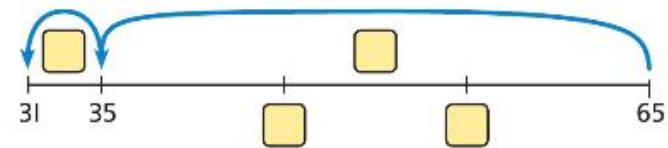
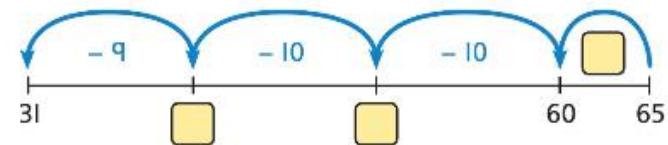
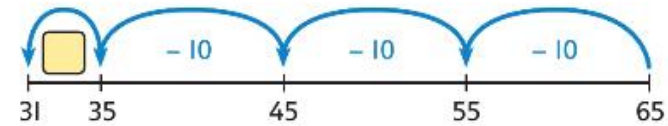
The difference between the scores is \square .

- 3 What is the difference between the scores?

Here are 3 ways.

	65
	31

CHALLENGE



The difference between the scores is \square .

What is the same?
What is different?

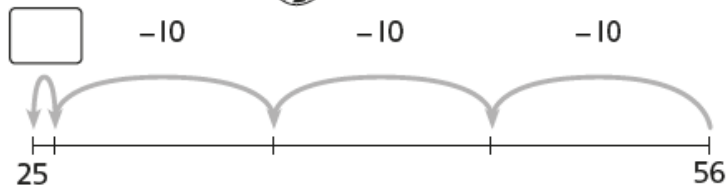
Can you find a
different set of
jumps to find
the difference?
And another?



Subtracting a 2-digit number from another 2-digit number ②


1 Penny has 56 . Ali has 25 .

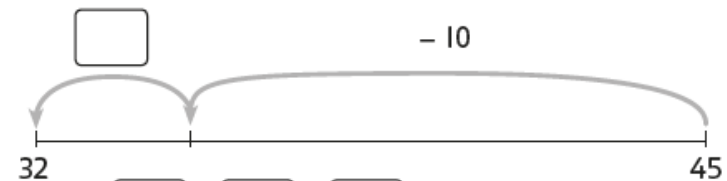
How many more  does Penny have?



Penny has more.

2 Class 2 has 45 . Class I has 32 .

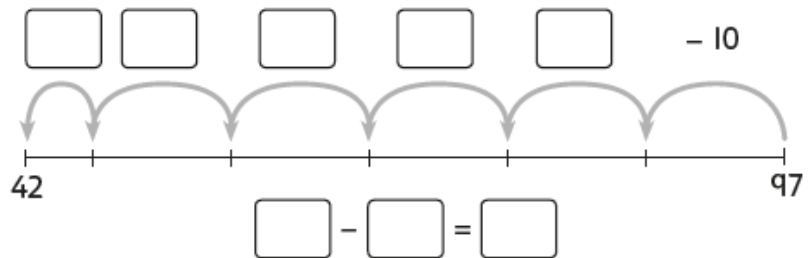
How many more  does Class I need, if the classes should have the same number?



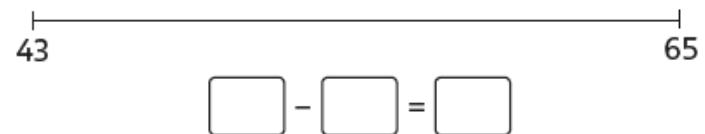
$$\square - \square = \square$$

Class I needs more.

3 Find the difference between 97 and 42.



4 a) What is the difference between 65 and 43?



b) Work out $48 - 11$.



In this question, think of the subtraction as finding the difference.



5 $85 - 43 = 65 - 43$

Is this calculation correct? How do you know?

CHALLENGE



6 Find the difference between 86 and 32.

Show two different ways of working it out.



Reflect

Work out $48 - 16$.




- I solved it by _____
- _____
- _____
- I could also have solved it by _____
- _____
- _____

Thursday afternoon -

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

Discover



- 1 a) Kara has 24  .
She needs 52 to make jam.
How many more does she need to pick?
- b) Ben needs 16 more  to make jam.
How many  does he have?

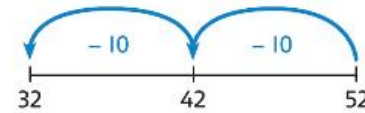
Share



I used a number line to count back, because I need to find the difference.

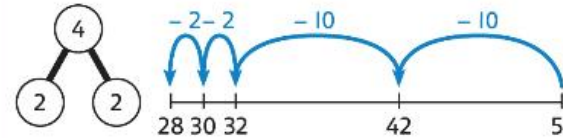


a) $52 - 24$



$$52 - 20 = 32$$

We know that 4 is made up of 2 and 2. This will help us.



$$32 - 2 = 30$$

$$30 - 2 = 28$$

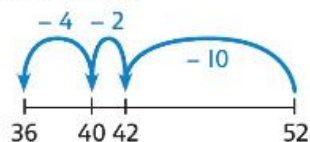
Kara needs 28 more  to make jam.





b) Ben needs 16 more to make the jam.

He needs 52 in total.



$$52 - 16 = 36$$

Ben has 36 .

I will count back 16 from 52.

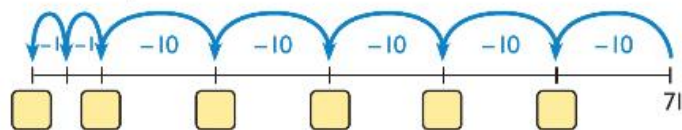


Think together

1 Zeb has 71 .

He uses 52 to make some jam.

How many does he have left?



$$71 - 52 = \square$$

Zeb has left over.

2 Lan has 35 .

She eats 18.

How many does she have left?



Lan has left.

3 There are 64 children picking . 17 are girls.

How many are boys?

There are boys.

CHALLENGE


I can do this in different ways. These methods are all subtracting!

Which method do you prefer?



5 Work out:

a) $81 - 16 = \square$


d) $74 - 26 = \square$ 

b) $82 - 16 = \square$

e) $64 - 26 = \square$

c) $83 - \square = 67$

f) $\square - 36 = 38$

6 a) $82 - 56 = 42 - \square$ 

b) $48 - \square = 58 - 29$

c) $51 - 19 = \square - 29$

 CHALLENGE

Reflect

There are two ways I can work out $32 - \square = 17$.

- They are _____
- _____
- _____
- _____

Subtracting a 2-digit number from another 2-digit number 4

Discover



Swimming competition.
First to 45 lengths wins.

Susie: 15 lengths Charlie: 19 lengths Kay: 27 lengths

Susie

Charlie

Kay

- 1 a) How many lengths does Susie have left?
- b) How many lengths does Kay have left?

Share

a)

Tens	Ones

T	O
4	5
-	1
	5
	3
	0

Susie has 30 lengths left.

b)

Tens	Ones

T	O
4	5
-	2
	7

Tens	Ones

T	O
4	³ 15
-	2
	7

Tens	Ones

T	O
4	³ 15
-	2
	7
	8

Tens	Ones

T	O
4	³ 15
-	2
	7
	1
	8

45 - 27 = 18 Kay has 18 lengths left.

Subtract the ones first, then the tens. If there are no ones left, I need to use a zero.



Remember, one ten is equal to ten ones.



Think together



- 1 Adults swim 64 lengths in a race.

Mr Peters has swum 47 lengths.

How many does he have left to swim?

Tens	Ones

$$\begin{array}{r} \text{T} \quad \text{O} \\ 6 \quad 4 \\ - 4 \quad 7 \\ \hline \end{array}$$

Tens	Ones

Mr Peters has more lengths to swim.

- 2 Miss Stone has to swim 64 lengths.

She has 38 lengths left.

How many lengths has Miss Stone swum?

Tens	Ones

$$\begin{array}{r} \text{T} \quad \text{O} \\ 6 \quad 4 \\ - 3 \quad 8 \\ \hline \end{array}$$

Miss Stone has swum lengths.

- 3 Layla swims 43 lengths. Oz swims 18 lengths.
How many more lengths does Layla swim?



Tens	Ones

$$\begin{array}{r} \text{T} \quad \text{O} \\ \square \quad \square \\ - \square \quad \square \\ \hline \square \quad \square \end{array}$$



Layla swims more lengths than Oz.

I think I can answer this using 2 methods.

I can still see this as a subtraction as I am finding the difference.





Subtracting a 2-digit number from another 2-digit number 4



1 At a party, 15 children eat one  each.

How many are left?





Tens	Ones
	

$$\begin{array}{r} \text{T} \quad \text{O} \\ 3 \quad 4 \\ - 1 \quad 5 \\ \hline \square \quad \square \end{array}$$

Tens	Ones
	

2 a) $57 - 28 = \square$

Tens	Ones	T	O
		<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>


b) $83 - 55 = \square$

Tens	Ones	T	O
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

3 $83 - 24 = \square$

$75 - 39 = \square$

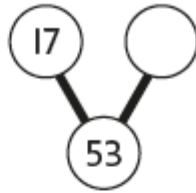
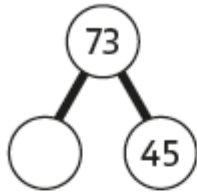
$90 - 48 = \square$

$\square = 54 - 17$ 

$\square = 54 - 27$

$17 = 54 - \square$

4 Complete the .



5 True or false?
When you subtract a number ending in 7
from a number ending in 2, the answer
always ends in 5.

CHALLENGE



A large empty rectangular box for writing an answer, with a small pencil icon in the top-left corner.

Reflect

- I know I can use subtraction when _____
- _____
- _____
- _____

