

Maths Week 5

Adding and subtracting



Lesson 1 - Adding and subtracting tens

In this first session we are going to be looking at adding and subtracting tens.

This will involve drawing out tens and ones using dienes.

I have attached a 100 square on the next page to help with this, you just have to remember that when you add 10 you go straight down one square, and when you subtract 10 you go straight up one square.

Like the previous weeks, there will be a video to watch, and an optional sheet to complete at the end of each session.

Please note: This week in the videos and on the sheets there is column addition/subtraction used. This is not something we do in Year 2 so please use one of the other methods already taught (tens and ones/empty number line)

<https://vimeo.com/415461655>

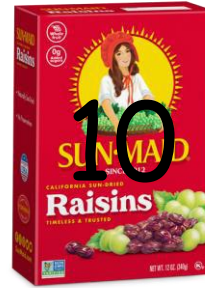
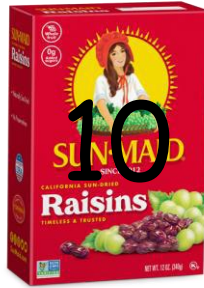
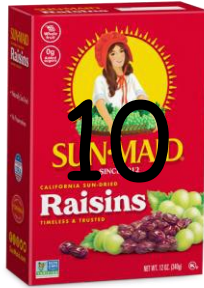
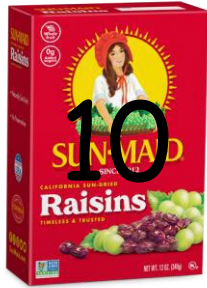
Add 10
Go down ONE square

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Subtract 10
Go up ONE square



Mr Johnson has some packs of raisins.
Each pack has 10 raisins.



How many raisins does he have in total?

Well done, you found out that Mr Johnson has 40 raisins!
Ms Farr gives him 2 more packs of raisins.
How many raisins does he have now?

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

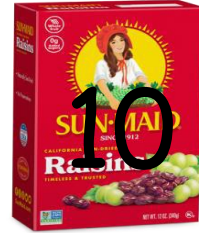
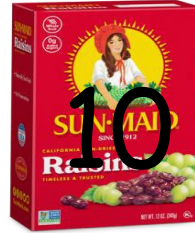
We can work out how many he has in total by going down 2 squares on the 100 square from 40.

So Mr Johnson has 60 raisins in total.

We could write this as:
 $40 + 20 = 60$

Your turn!

Mrs MacMillan has 5 packs of raisins.



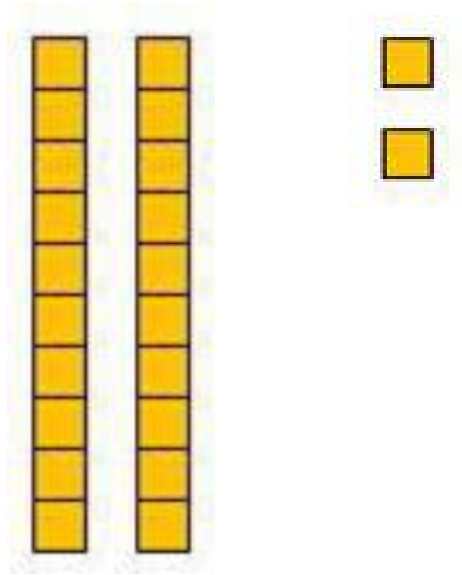
Ms Ellis gives her 3 more packs.



How many raisins does she have in total?

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

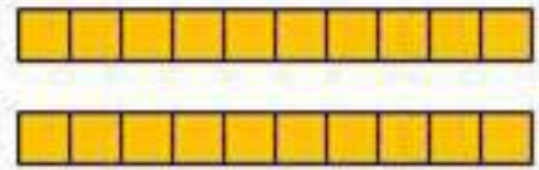
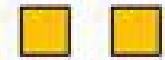
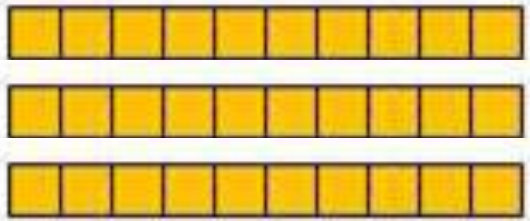
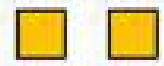
We can also use dienes to help us with addition.



Here we can see 2 tens and 2 ones or **22**

Let's try $22 + 10$ using tens and ones.



Tens	Ones
	
	
	

Original number (22) split into tens and ones.

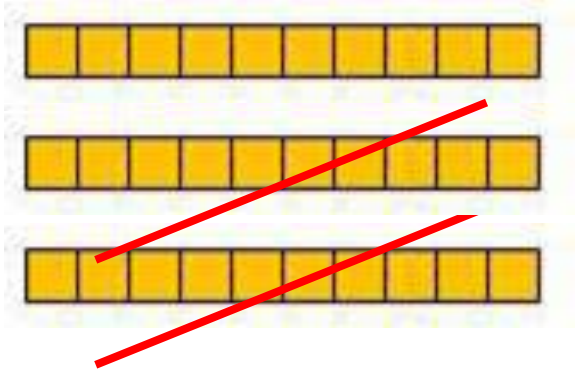
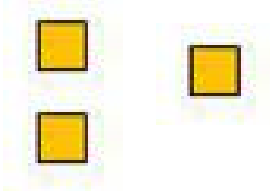
The number added on (10)

The total
32

Has the tens number changed?

Has the ones number changed?

For subtraction we do the same, but take the tens away.
Below we are doing $33 - 20$

Tens	Ones
	

We put in our original number (33) and cross two of the tens out.
 $33 - 20 = 13$

What do you notice about the
tens and the ones numbers this
time?

Try these now. Draw the tens and ones to help you.

$$35 + 20 =$$

$$48 + 30 =$$

$$23 + 60 =$$

$$64 - 30 =$$

$$43 - 20 =$$

$$78 - 40 =$$



When adding and subtracting tens,
the ones **DO NOT** change.

Challenge!

 = 30  = 10  = 40

Complete the calculations.

a)  +  =

b)  -  =

c)  -  =

Some of you may want to complete the sheet for this lesson now!

Add and subtract 10s



1 a) Eva has some marbles.



How many marbles does Eva have?

Eva has marbles.

She buys 3 more boxes of marbles.

How many marbles does she have now?

b) Teddy has some marbles.



How many marbles does Teddy have?

Teddy has marbles.

He gives 5 boxes of marbles to his friend.

How many marbles does he have now?

2 What calculation is represented?

Complete the number sentence.

Tens	Ones
	
	
	

+ 

+ =

	T	O
	2	4
+	1	0
	3	4

3 Use base 10 to complete the calculations.

a) $24 + 20 =$

b) $17 + 50 =$

c) $40 + 16 =$



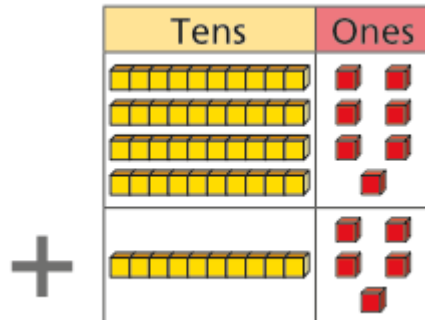
Lesson 2 - Adding 2 digit numbers

In this session we will build on yesterday's work and start adding 2 digit numbers.

At school we generally use tens and ones to do this or the empty number line. I suggest using whichever method you feel more comfortable with!

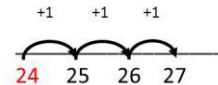
Please note: This week in the videos and on the sheets there is column addition/subtraction used. This is not something we do in Year 2 so please use one of the other methods already taught (tens and ones/empty number line)

<https://vimeo.com/415699218>



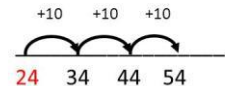
Addition
Using a blank number line

$24 + 3 =$



Adding a 1 digit
number

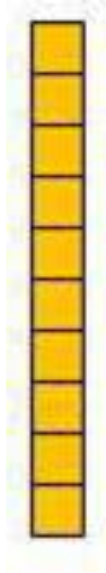
$24 + 30 =$



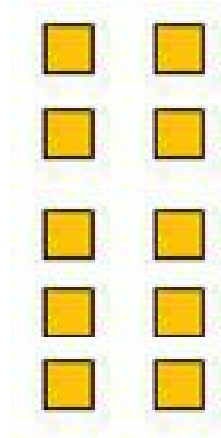
Adding a tens number



Quick recap!



=



1 ten = 10 ones

Starter



ones = ten and ones

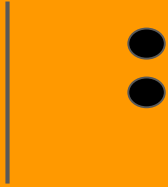


ones = ten and ones

Let's look at adding tens and ones now.
Our sum will be $12 + 24$

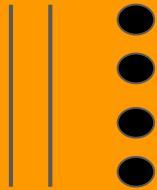
The first step is to split the numbers into tens and ones.

12



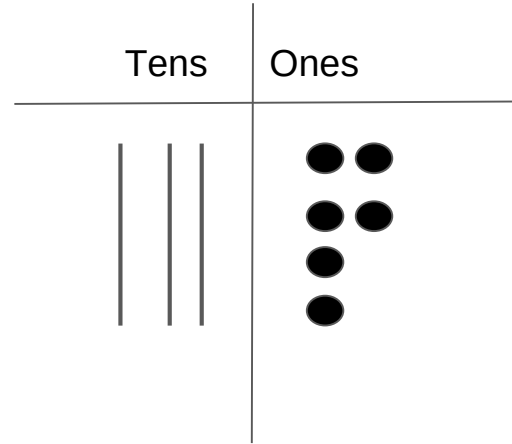
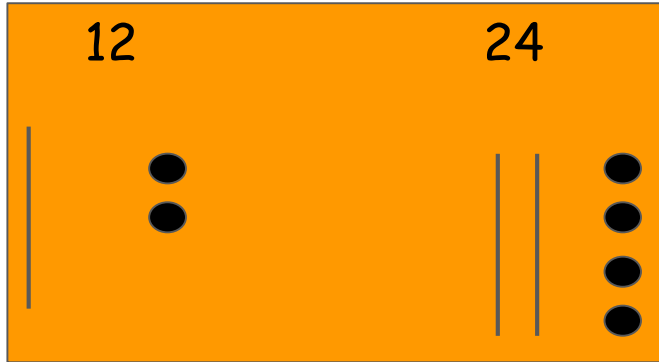
1 ten and 2 ones

24



2 tens and 4 ones

Now we can add the tens and ones together in the correct columns.



This gives us 3 tens and 6 ones.
We know that 3 tens is 30 and 6 ones is 6.
So our answer is 36.

Now try these using the tens and ones method:

$13 + 25 =$

$35 + 21 =$

$41 + 38 =$

Tens	Ones



Top tip!

Split the numbers into tens and ones first.

We can also use the empty number line method.

$$32 + 27 = 59$$

2 tens and 7 ones

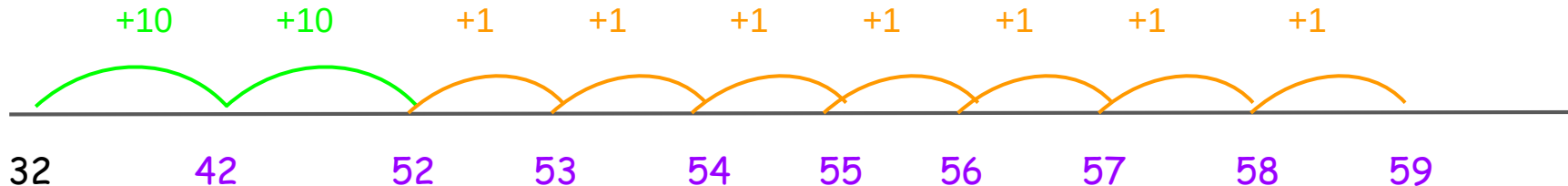
Step 1: Draw a line out and put the bigger number at the start of the line.

Step 2: Split the other number into tens and ones.

Step 3: Draw in your jumps of ten and label them first (remember to leave enough space between each one)

Step 4: Draw in your jumps of one and label them.

Step 5: Add on the tens and ones underneath and the last number will be your answer!

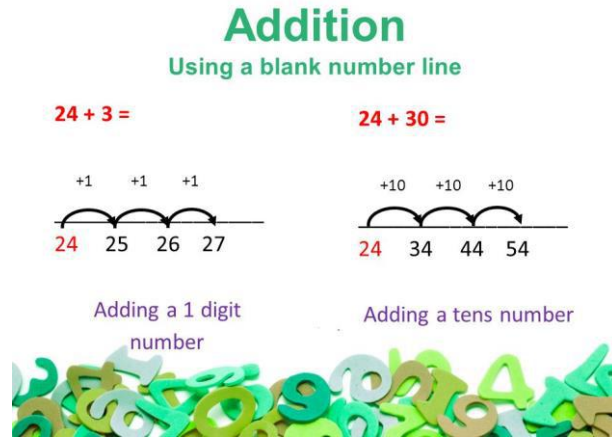


Now try these using the empty number line:

$$23 + 23 =$$

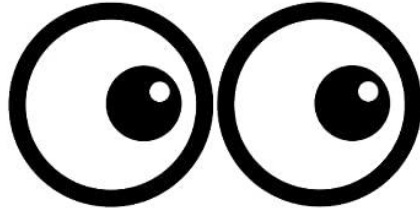
$$35 + 31 =$$

$$52 + 37 =$$



I'm going to split these numbers into tens and ones. Using your sharp eyes see if you can figure out what I need to do differently here.

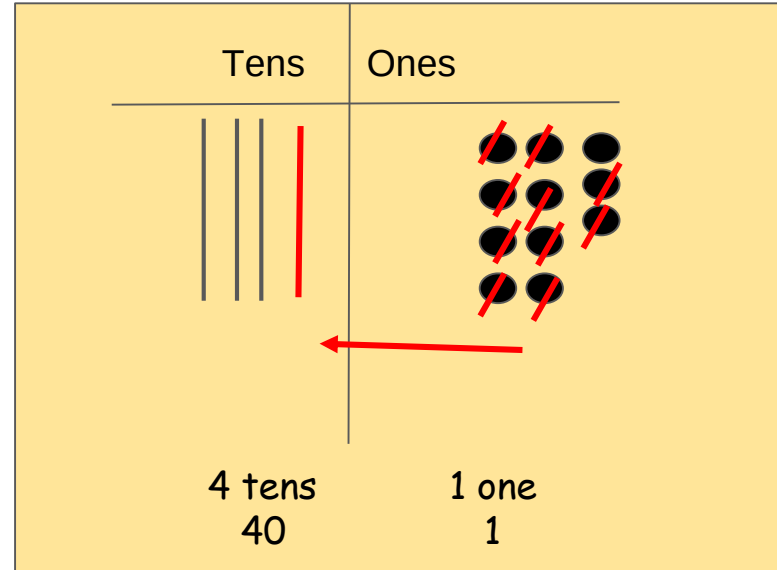
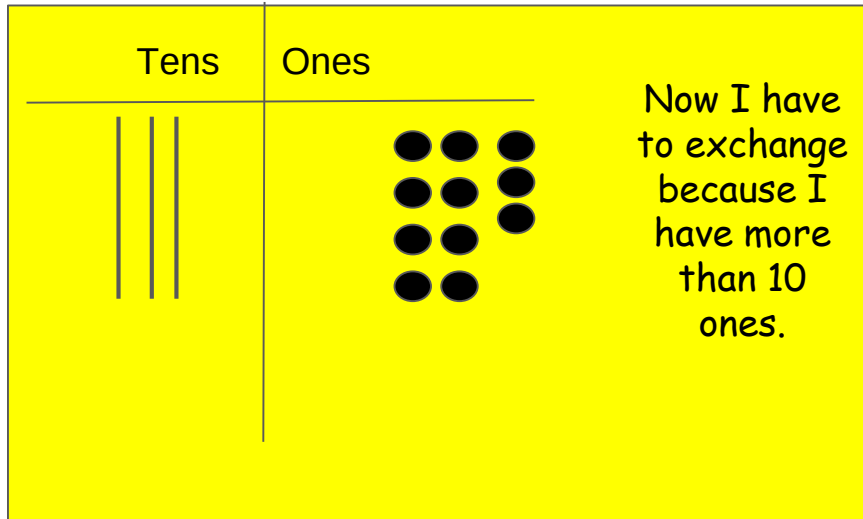
$$18 + 23 =$$



Well done, I need to **exchange**!

We exchange when there are 10 or more ones.

Here I have put $18 + 23$ into the tens and ones columns.



Now try some of these, remember to exchange!

a) $7 + 4 =$

f) $37 + 14 =$

b) $10 + 30 =$

g) $22 + 19 =$

c) $17 + 34 =$

h) $48 + 19 =$

d) $19 + 21 =$

i) $33 + 29 =$

e) $18 + 64 =$

j) $39 + 47 =$

★ Challenge! ★

Fill in the missing digits to complete the number sentence.

$$_9 + _3 = 62$$

Compare answers with a partner.

How many different answers can you find?

Some of you may want to complete the sheet for this lesson now!

Add 2-digit numbers (2)

White
Rose
Maths



1 Count the ones and complete the sentences.



ones = ten

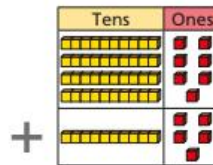


ones = ten and ones



ones = ten and ones

2 Complete the additions.



ones + ones = ones

ones = ten + ones

tens + tens = tens

+ =

Lesson 3 - Subtracting 2 digit numbers

In this lesson we will look at subtracting 2 digit numbers.

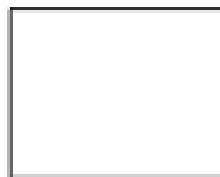
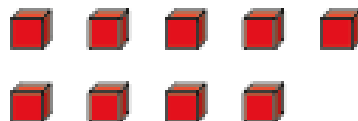
Just like addition, we use the tens and ones method and the empty number line. You can use either one, whichever you feel more comfortable with!

Please note: This week in the videos and on the sheets there is column addition/subtraction used. This is not something we do in Year 2 so please use one of the other methods already taught (tens and ones/empty number line)

<https://vimeo.com/415699365>

Starter

What number is represented?



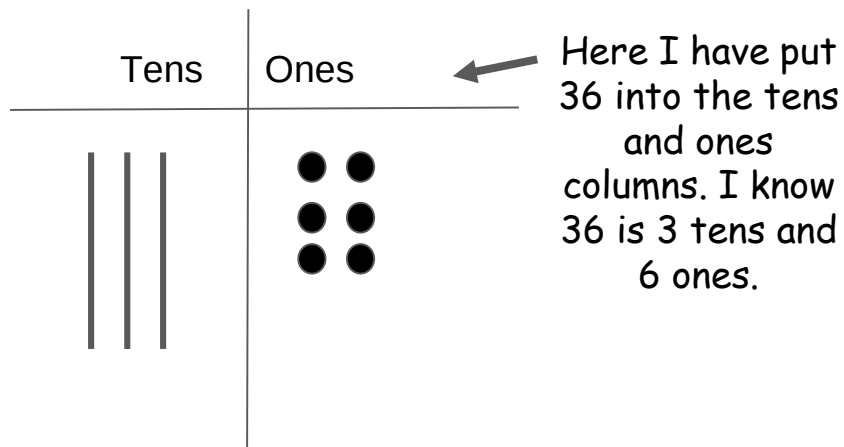
What number is represented?



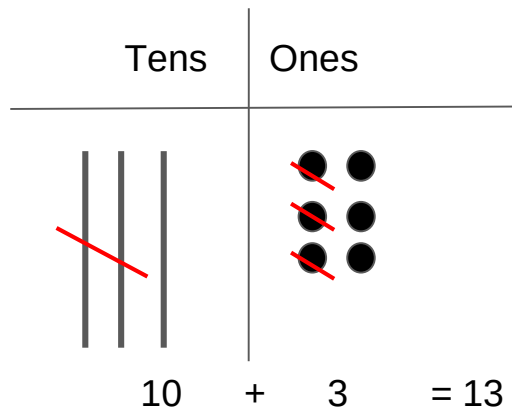
Let's start with the tens and ones method.

It's really important to remember that when you use this method for subtraction that you **only put in the first number**.

$$36 - 23 = 13$$



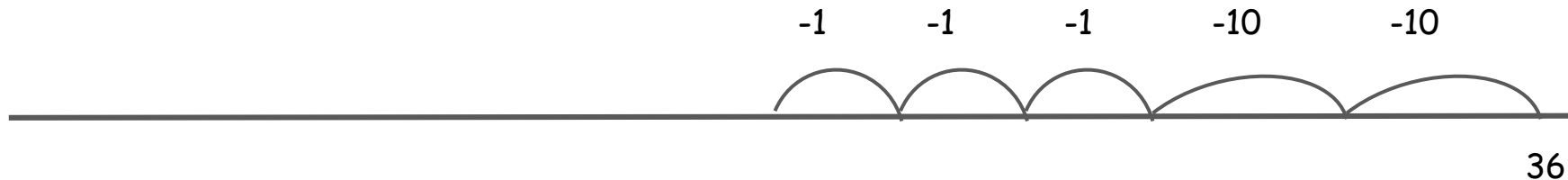
Now I need to take away 23, so I split it into tens and ones.
2 tens and 3 ones. I cross out the ones first, then the tens.



Let's do this one again but with the empty number line.

The empty number line for subtraction is very similar to addition, you just start at the other end of the line and go backwards instead. You **must put the first number** in the sum at the end of the line.

$$36 - 23 =$$



See if you can finish this one now and find the answer. Write the answer at the end of each 'jump'.

Practice time!

Try these using tens and ones or the empty number line, or both!

$$37 - 22 =$$

$$49 - 38 =$$

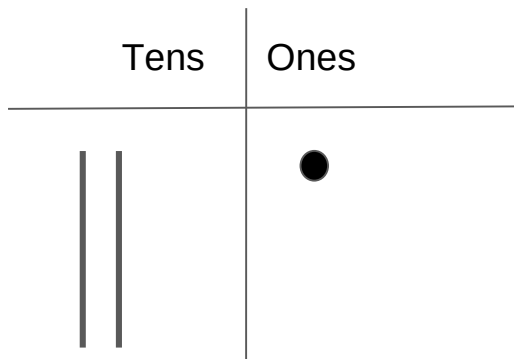
$$67 - 45 =$$

$$48 - 23 =$$

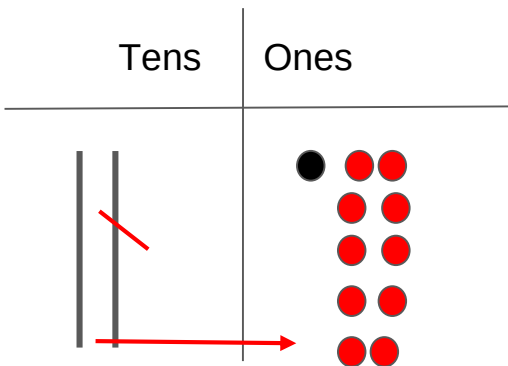
Exchanging

When we are using the tens and ones and we do not have enough ones to take away, we have to exchange. Let's look at this sum:

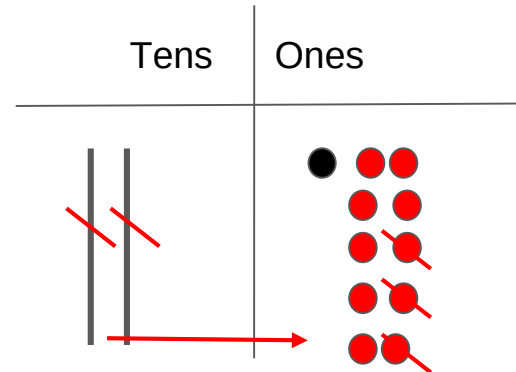
$$21 - 13 =$$



I can't take away the ones because I do not have enough.



One ten then becomes ten ones and I can now take the ones away.



I take away the 1 ten. Now I have no tens left and 8 ones so my answer is 8

Try these exchanging subtraction questions:

$$23 - 14 =$$

$$34 - 29 =$$

$$67 - 49 =$$

$$54 - 38 =$$

Remember:
You can always use
the empty number
line instead of tens
and ones if you find it
easier!

★ Challenge! ★

Dexter has 33 bricks.



Rosie has 19 bricks.



- a) How many bricks do Dexter and Rosie have altogether?

- b) How many more bricks does Dexter have than Rosie?

Some of you may want to complete the sheet for this lesson now!

Subtract 2-digit numbers (2)

i a) What number is represented?

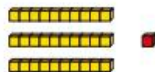


Subtract 12

What number is left?

$\square - 12 = \square$

b) What number is represented?



Subtract 12

What number is left?

$$\square - 12 = \square$$

c) What is the same about part a) and part b)?
What is different?

2 Use base 10 to complete the subtractions.

a) $23 - 6 =$

d) $45 - 26 =$

b) $33 - 7 =$

e) $63 - 35 =$

c) $33 - 17 =$

f) $82 - 24 =$

3 Tommy is working out $23 - 5$

$$\begin{array}{r} \text{TO} \\ 12 \overline{) 135} \\ \underline{12} \\ 15 \\ \underline{12} \\ 30 \\ \underline{30} \\ 0 \end{array}$$

Talk about Tommy's method with a partner.

Lesson 4 - Bonds to 100

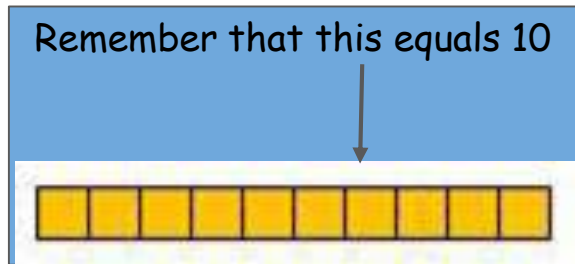
In this lesson we look at making number bonds to 100.

It can be really helpful to use a 100 square to do this as it allows you to see what number you have already taken away from 100, and what is left.

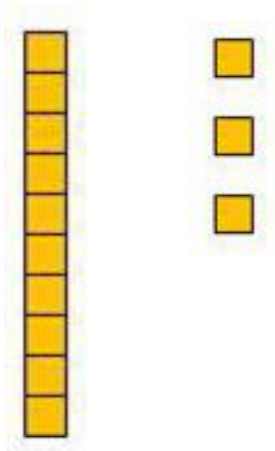
From this we can use it to help with missing number problems to 100 too.

<https://vimeo.com/415699539>

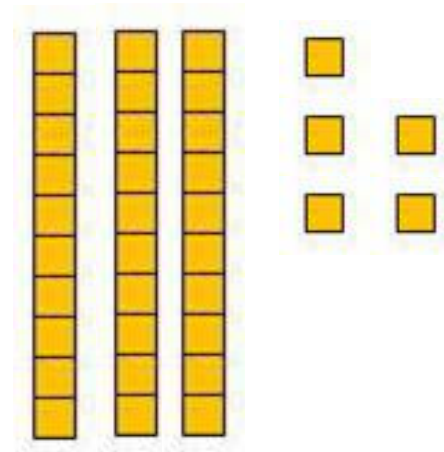
Recap



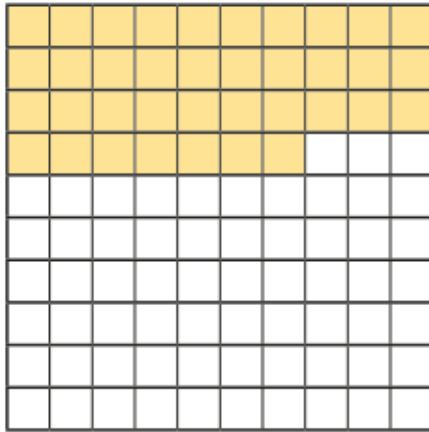
What total do I have here?



What total do I have here?



Here is a hundred square.



Top tip:
See how many lines are fully shaded, each one is worth 10.
Then all you need to do is add on the ones.

How many squares are shaded?

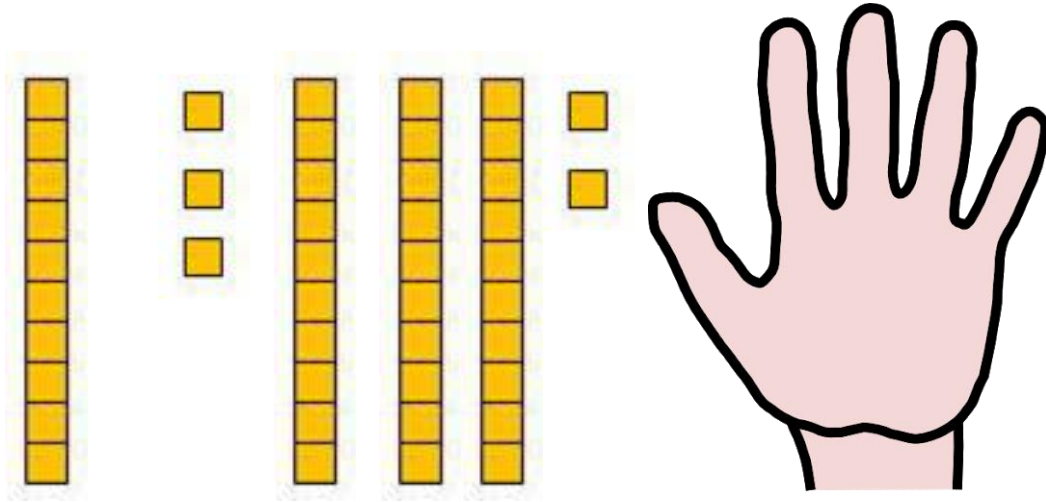
How many squares are not shaded?

+

= 100

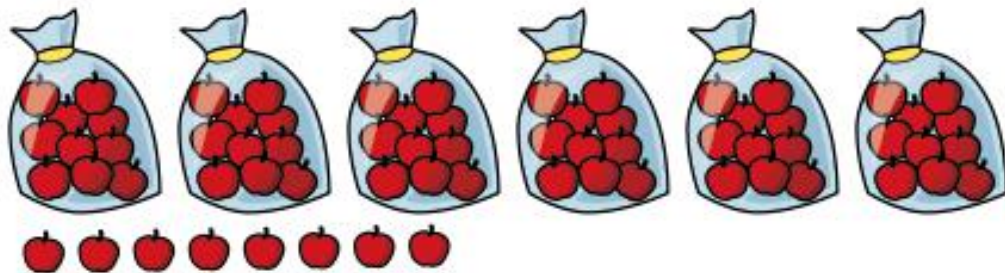
I have made 100 with dienes.

Mr Johnson has covered some of it up with his hand.



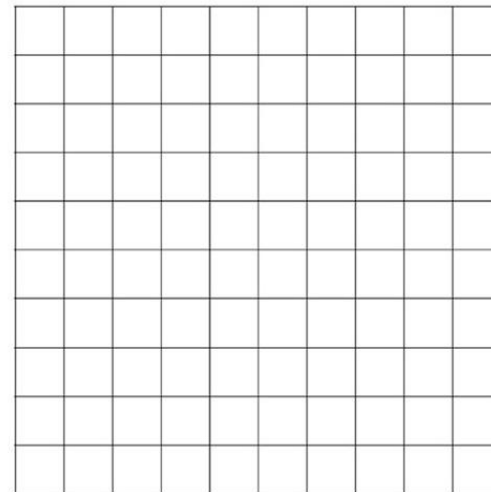
Can you draw the missing dienes to make 100?

Mrs Harris has these apples to bring to sports day.



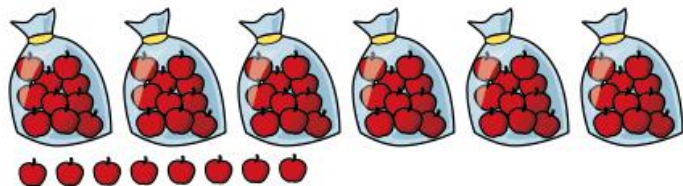
She needs 100 apples.

How many more apples does Mrs Harris need?



If it helps you can fill in how many you have already in the 100 square and then see what's left.

Let's look at this one again



She needs 100 apples.

How many more apples does Mrs Harris need?

We can put this into a number sentence to help us.

We know there are 68 apples, but we need to get 100.

$$68 + \underline{\quad} = 100$$

100	
68	?

I could then rewrite the sum as $100 - 68$
Or I could count on from 68 to 100.
See if you can solve the missing number!

Try some of these now.

Be careful, some have the equals sign the other way around!

$$20 + ? = 100$$

$$? + 50 = 100$$

$$100 = ? + 64$$

$$100 = 38 + ?$$

$$? = 100 - 42$$



Top tip:
Putting the information
you have into a bar
model can be really
helpful.



Challenge!

Whitney is working out $38 + \square = 100$



The missing number is 72
because I need 2 more ones
and 7 more tens.

Do you agree with Whitney? _____

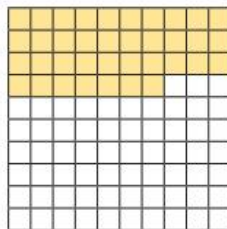
Explain your answer

Some of you may want to complete the sheet for this lesson now!

Bonds to 100 (tens and ones)

White
Rose
Maths

1 Here is a hundred square.

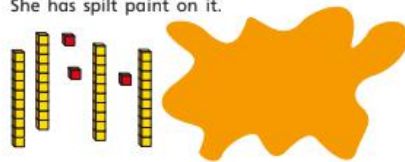


How many squares are shaded?

How many squares are not shaded?

$$\square + \square = 100$$

2 Eva has made 100 using base 10. She has spilt paint on it.



Draw the missing pieces of base 10

3 Mrs Harris has these apples for Sports Day.



She needs 100 apples.

How many more apples does Mrs Harris need?

Lesson 5

This week we are asking children to practise the mental skills of multiplying and dividing. In year 2 we focus on the 2 5 10 multiplication and division tables, but some children are ready to learn the 3 times tables and division facts.

2x tables <https://www.bbc.co.uk/bitesize/topics/zqbg87h/articles/zc7ygdm>

5x tables <https://www.bbc.co.uk/bitesize/topics/zqbg87h/articles/zw8qxfr>

These links have songs and activities that could be completed.

This is a more challenging game that asks children to create fact families. This is something we started to learn about in year 2. <https://www.topmarks.co.uk/number-facts/number-fact-families>

This week we would like you to practice your division and multiplication knowledge.

Over the week practice your 2 5 10 times and division tables. (You could challenge yourself and practice the 3 times table too)

When you feel you know the facts really well play 'Beat the Calculator' game.

You will need a partner who has a calculator. Say a division or multiplication fact and see if you can write the fact with the answer quicker than the person who has to type it into a calculator.

Mental Maths



I bet you can !!