

# Year 2 Maths

## Bonds to 100

Monday 25.01.21

# MATHS



Today we are going to look at how to find number bonds to 100. This will help to solve our two step money problems tomorrow.

# Fluency

Solve these equations.

$$26 + 38 =$$

$$67 + 29 =$$

$$56 - 32 =$$

$$43 - 18 =$$

There are 47 cats in Mrs Riley's garden. 15 more appear. How many are there now?






How many ways can you make 8 using addition?

# Vocabulary

Number - Place Value Year 2

## Tens and Ones

A 2-digit number has tens and ones.




Tens	Ones
3	4

www.twinkl.co.uk


Number - Place Value Year 2

## Partition

To split/ separate/ divide numbers into smaller parts.  
This can make calculations easier.



You can also partition smaller numbers.




www.twinkl.co.uk

Addition & Subtraction Year 2

## Crossing 10

Going past a multiple of 10 when you are adding or subtracting.

$$17 + 5 = 22$$


www.twinkl.co.uk

Addition & Subtraction Year 2

## Efficient

Working in a way without wasting time.

$$18 + 6 =$$

An efficient way of adding would be to count on from 18 instead of starting from 0.

www.twinkl.co.uk

Addition & Subtraction Year 2

## Calculation

Working out the answer to a maths problem.

$$4 + 5 = 9$$
$$10 - 5 = 5$$
$$20 - 4 = 16$$

www.twinkl.co.uk

# Explore

## Bonds to 100

Use a 100 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

- 45 squares are shaded, how many are not shaded?



**Write a number sentence to show this.  
Can you show the fact family?**



How many tens are in 100?

Answer

Bonds to 100

Use a 100 square.

45 squares are shaded,  
how many are not  
shaded?

$$100 - 45 = 55$$

So, there are 55 squares  
that are not shaded.

**Talk to your grown up:**  
How did you solve this?

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



# Explore

## Bonds to 100

Use a 100 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

54 squares are shaded,  
how many are not shaded?



**Write a number sentence to show this.  
Can you show the fact family?**



How many tens are in 100?

# Explore

## Bonds to 100

Use a 100 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

54 squares are shaded,  
how many are not  
shaded?

$$100 - 54 = 46$$

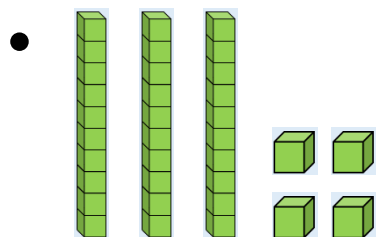
So, there are 46 squares  
that are not shaded.



# Guided Work

# Bonds to 100

Mrs Riley is making 100.  
How much more does she need if she has:



- 5 tens and 3 ones

- 37



Watch Mrs Riley's Video  
to see how to do this.



**Write a number sentence to match each calculation. Can you show the fact family?**

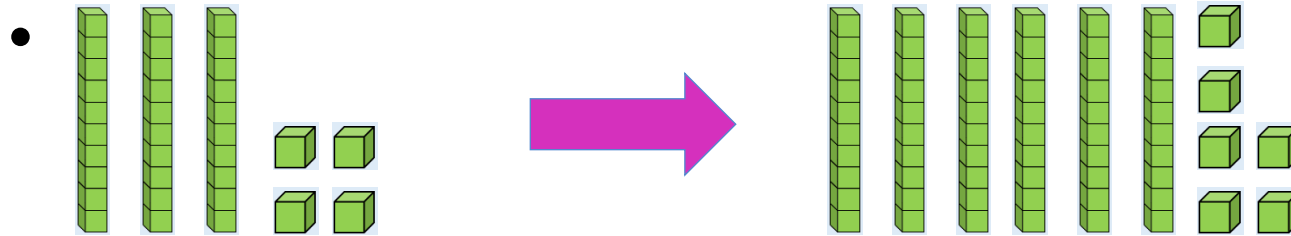


# Guided work

# Bonds to 100

Let's review:

Mrs Riley Needs:



- 5 tens and 3 ones → 4 tens and 7 ones

- 37 → 63

# Your Turn

Choose a number card  
Work out how many more you would need to make 100.  
Record your answer as a number sentence. Everything you need is in the separate PDF file '**Practical Activity Maths 25.01.21**'. You can find it on our [Remote Learning page](#).  
**Complete as many examples as you need to help you feel confident.**

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

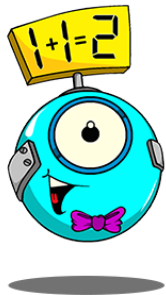
How many more would you need to add to get to 100 from:

**74?**

*26 more from 74 to 100.*

$74 + 26 = 100$

$100 = 74 + 26$



**Show your calculation in a part whole diagram and create the fact family.**

## Guided Practice

## Bonds to 100

Can you solve this without using Base 10 or a hundred square?

$$25 + \underline{\quad} = 100$$

This is the same as finding the difference between two numbers. This means I can either count on or count back.



# Guided Practice

## Bonds to 100

### Counting on

Place 25 at the start of your number line.

Jump on by 5 ones to get to the next number ending in 0 (30). Then use your number bonds to help you jump from 30 to 100.

$$3 + 7 = 10$$

$$\text{So } 30 + 70 = 100$$

Jump on by 70.

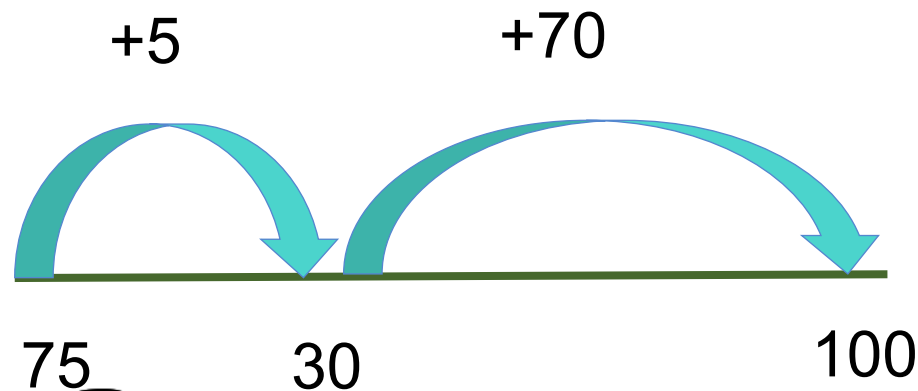
Count the jumps.

I've jumped on by 75

So:

$$25 + 75 = 100$$

$$25 + \underline{\quad} = 100$$



# Guided Practice

## Bonds to 100

### Counting back

$$25 + \underline{\quad} = 100$$

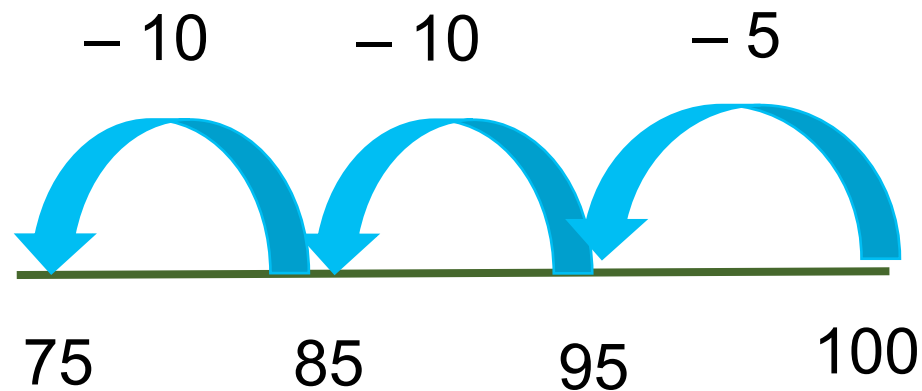
Place 25 at the end of your number line.

Jump back by 5 ones and 2 tens (25).

You stop at 75

So

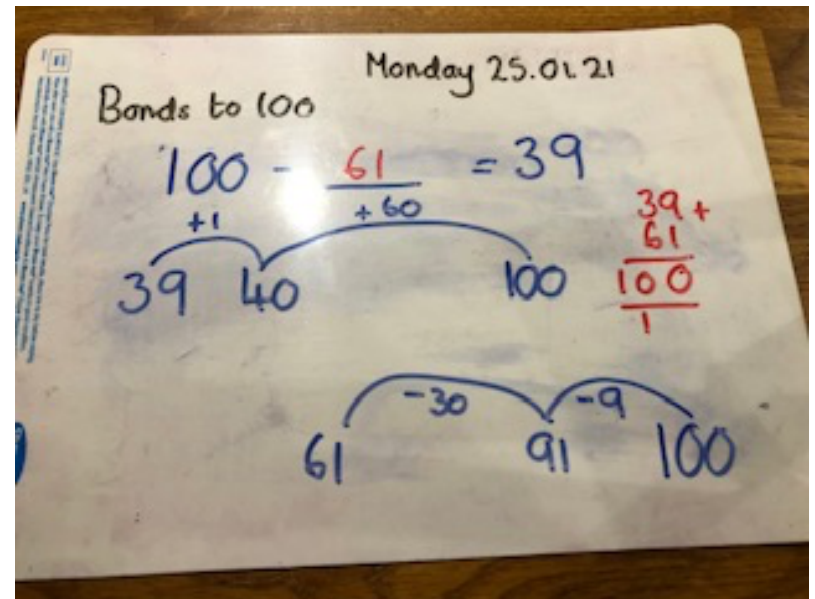
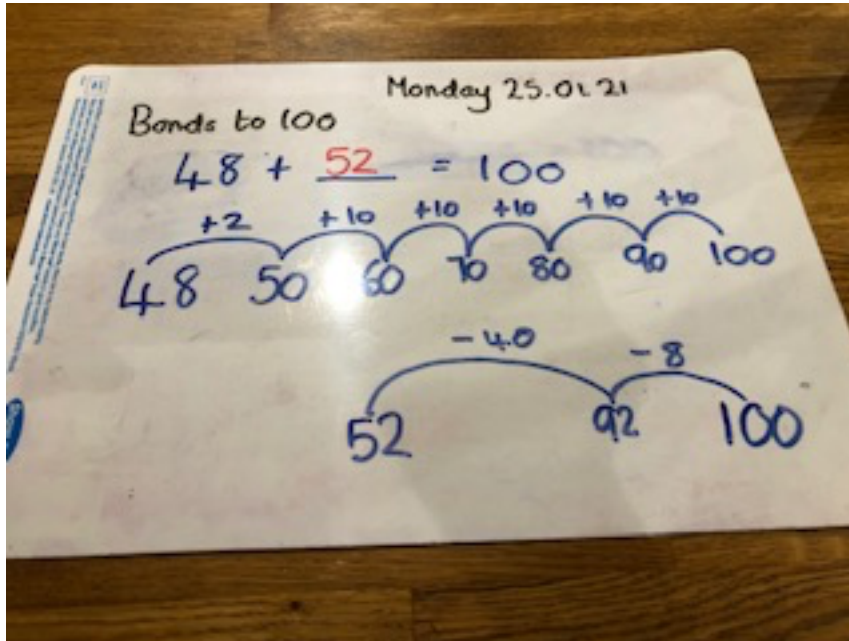
$$25 + 75 = 100$$



Talk to your grown up about which method you prefer.

# More Examples

# Bonds to 100



## Your turn

## Bonds to 100

$$100 - 46 = \square$$

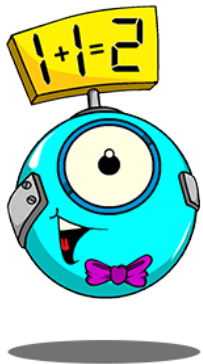
$$72 + \square = 100$$

$$100 - \square = 34$$

$$\square + 55 = 100$$

$$100 - 39 = \square$$

$$47 + \square = 100$$



Show the fact family.  
Create a word problem to  
match one of the addition and  
one of the subtraction  
sentences?



# Further Practice

# Bonds to 100

1 How many more would need to be added to make 100?

<p>a  _____</p>	<p>b  _____</p>
-----------------	-----------------

2 Complete the number bonds that add up to make 100.

a 2 tens and 7 ones? _____	b 4 tens and 5 ones? _____
c 5 tens and 4 ones? _____	d 8 tens and 3 ones? _____

3 Join up the number bonds that add up to make 100.

26	15	17	57
32	33	43	35
85	74	12	29
67	52	65	83
48	68	71	88

4 Colour 5 pairs of number bonds that add up to make 100.

29	36	52	21	43	58	11	86	32	88	74	53	96	10
14	19	42	25	87	65	47	41	24	71	33	8	50	48

5 Complete the calculations.

a $30 + \underline{\quad} = 100$	b $\underline{\quad} + 61 = 100$	c $28 + \underline{\quad} = 100$
d $\underline{\quad} + 18 = 100$	e $37 + \underline{\quad} = 100$	f $\underline{\quad} + 89 = 100$

If you want some further practice, have a go at these questions. **They are optional. Only complete them if you want to.**





# Problem Solving

How would you solve this? Talk to your grown up.

The nearest museum is 100 miles away. So far Seb's mom has drive 75 miles. How much further does she have to go?



**Can you solve it in a different ways?**

# Let's Review

## Let's Review

The nearest museum is 100 miles away. So far Seb's mom has driven 75 miles. How much further does she have to go?

Add  $75 + 25 = 100$

$\begin{array}{ccccccc} & +5 & & +10 & & +10 & \\ \text{75} & \text{80} & & \text{90} & & \text{100} & \end{array}$

$10 + 10 + 5 = 25$

$\begin{array}{c} \text{10} \\ \text{10} \\ \text{5} \\ \hline \text{20} \end{array}$

Subtract

$100 - 25 = 75$  or  $100 - 75 = 25$

$\begin{array}{ccccc} & -70 & & -5 & \\ \text{25} & & \text{95} & & \text{100} \end{array}$

Does it matter which way you solve it?



# Reasoning

## Bonds to 100

### Common mistakes

$$35 + 75 = 100$$

Is this correct?  
Talk to your grown up.  
Explain your answer.



# Reasoning

## Bonds to 100

### Common mistakes



$$35 + 75 = 100$$

Is this correct?

Talk to your grown up.

Explain your answer.

It's incorrect  $35 + 75 = 110$

$$30 + 70 = 100$$

$$5 + 5 = 10$$

$$100 + 10 = 110$$

Mrs. Riley has looked at the tens first.

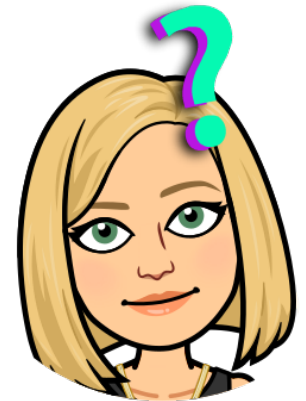
# Reasoning - 2

## Bonds to 100

Each row and column adds up to 100.

35	35	
	25	
5		55

Complete the grid.





Well done  
Year 2. You  
are super  
stars.

# ANSWERS



# Answers

$$26 + 38 = 64$$

$$67 + 29 = 96$$

$$56 - 32 = 24$$

$$43 - 18 = 25$$

$$47 + 15 = 62$$

There are 62 cats  
in Mrs Riley's  
garden.



$$0 + 8 = 8$$

$$1 + 7 = 8$$

$$2 + 6 = 8$$

$$3 + 5 = 8$$

$$4 + 4 = 8$$

$$5 + 3 = 8$$

$$6 + 2 = 8$$

$$7 + 1 = 8$$

$$8 + 0 = 8$$



# Answers

$$100 - 46 = 54$$

$$100 - 66 = 34$$

$$100 - 39 = 61$$

# Bonds to 100

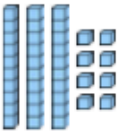
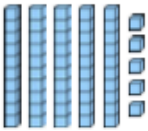
$$72 + 28 = 100$$

$$45 + 55 = 100$$

$$47 + 53 = 100$$

# Answers

1 How many more would need to be added to make 100?

<p>a</p>  <p>62</p>	<p>b</p>  <p>45</p>
--	--

2 Complete the number bonds that add up to make 100.

<p>a</p> <p>2 tens and 7 ones</p> <p>7 tens and 3 ones</p>	<p>b</p> <p>4 tens and 5 ones</p> <p>5 tens and 5 ones</p>
<p>c</p> <p>5 tens and 4 ones</p> <p>4 tens and 6 ones</p>	<p>d</p> <p>8 tens and 3 ones</p> <p>1 ten and 7 ones</p>

3 Join up the number bonds that add up to make 100.

<table border="1"> <tr><td>26</td><td>15</td></tr> <tr><td>32</td><td>33</td></tr> <tr><td>85</td><td>74</td></tr> <tr><td>67</td><td>52</td></tr> <tr><td>48</td><td>68</td></tr> </table>	26	15	32	33	85	74	67	52	48	68	<table border="1"> <tr><td>17</td><td>57</td></tr> <tr><td>43</td><td>35</td></tr> <tr><td>12</td><td>29</td></tr> <tr><td>65</td><td>83</td></tr> <tr><td>71</td><td>88</td></tr> </table>	17	57	43	35	12	29	65	83	71	88
26	15																				
32	33																				
85	74																				
67	52																				
48	68																				
17	57																				
43	35																				
12	29																				
65	83																				
71	88																				

4 Colour 5 pairs of number bonds that add up to make 100.

29	36	52	21	43	58	11	86	32	88	74	53	96	10
14	19	42	25	87	65	47	41	24	71	33	8	50	48

5 Complete the calculations.

<p>a</p> <p><math>30 + \underline{70} = 100</math></p>	<p>b</p> <p><math>\underline{39} + 61 = 100</math></p>	<p>c</p> <p><math>28 + \underline{72} = 100</math></p>
<p>d</p> <p><math>\underline{82} + 18 = 100</math></p>	<p>e</p> <p><math>37 + \underline{63} = 100</math></p>	<p>f</p> <p><math>\underline{11} + 89 = 100</math></p>

# Reasoning - 2

## Bonds to 100

Each row and column adds up to 100.

35	35	30
60	25	15
5	40	55

Complete the grid.

