

Year 1 -

Composition of numbers within 100

In Year 1, the end of year expectation, is that children know the value of **tens** and **ones** in a two-digit number within 100.

This means that by the end of the year, all children should be able to confidently count within 100, understanding what the numbers are made up of and how to represent them.



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This draws upon key foundational concepts explored in Reception, where children have understood that numbers 10-19 are made up of one ten and extra ones and 20 is made up of two tens and no extra ones.



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Children begin by simple counting practise and begin to make some clear links. They start to understand that the digits in the number tell us about their value.

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

forty-two

four tens two ones

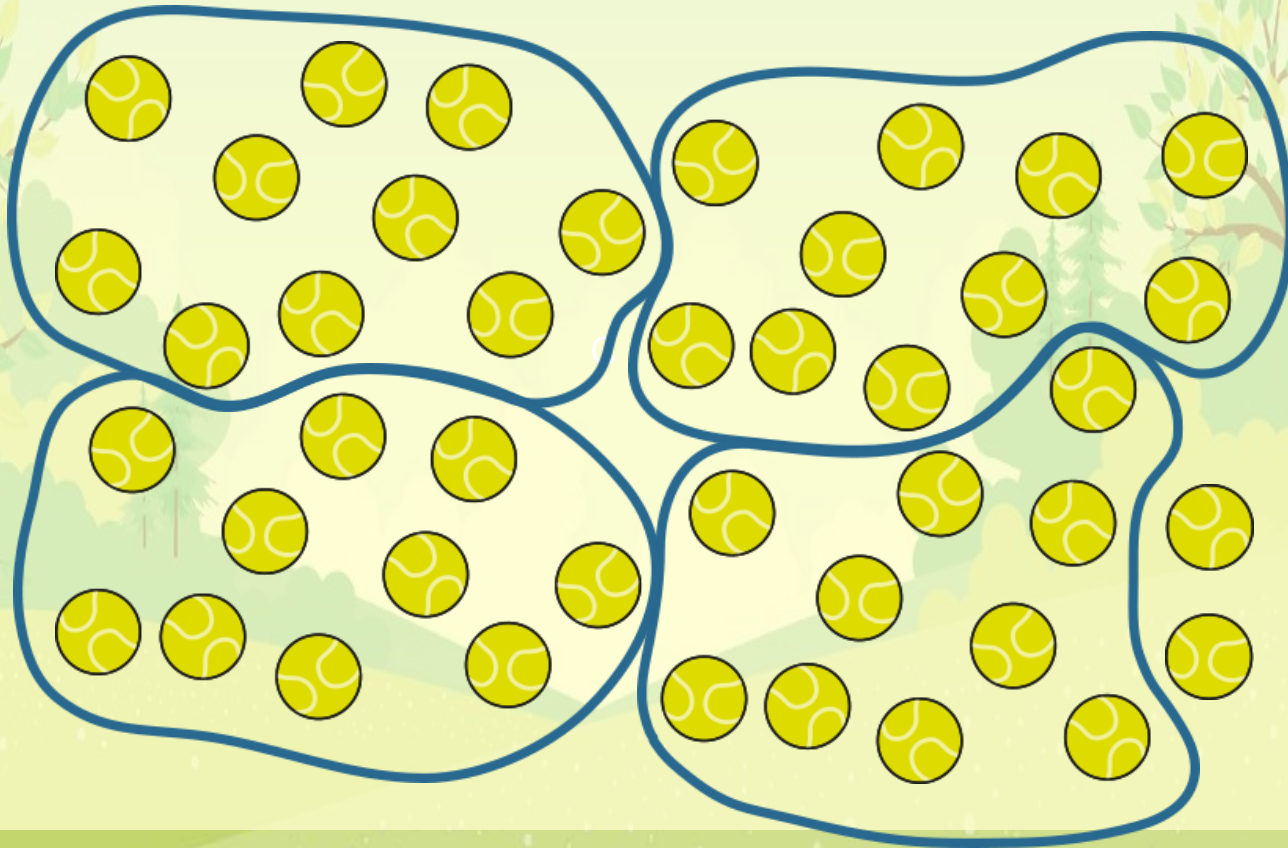


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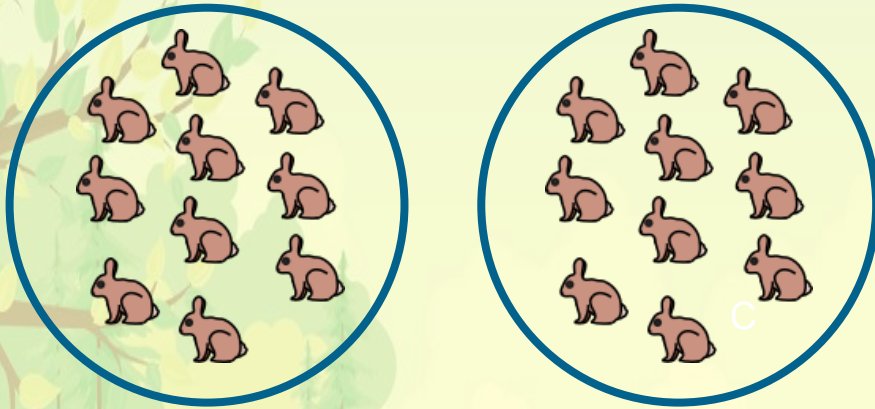
They then learn that objects can be counted efficiently by making groups of ten.



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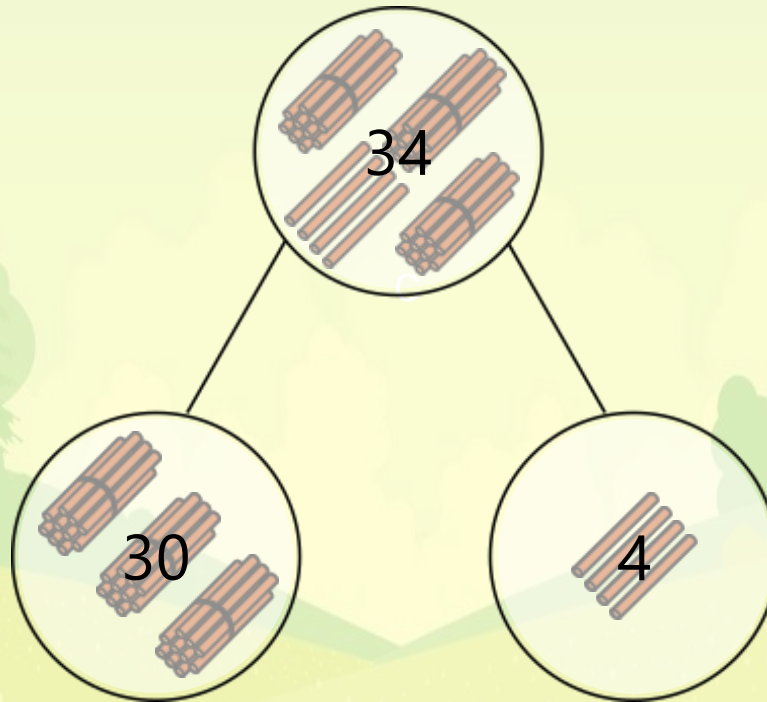
10s	1s
2	7



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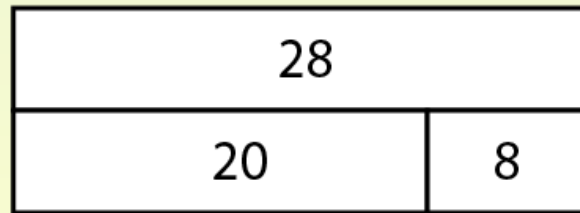
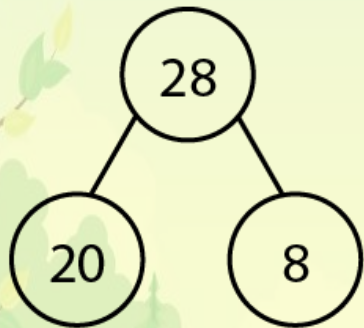
Children use the part-part-whole model to represent the partitioning of two-digit numbers into tens and ones (parts), and the aggregation of tens and ones (parts) to make 'whole' two-digit numbers.



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The part-part-whole and bar models are then linked to the corresponding equations, so that the children can then complete addition and subtraction calculations, using their knowledge of composition of number.



$$20 + 8 = 28$$

$$8 + 20 = 28$$

$$28 = 20 + 8$$

$$28 = 8 + 20$$

$$28 - 20 = 8$$

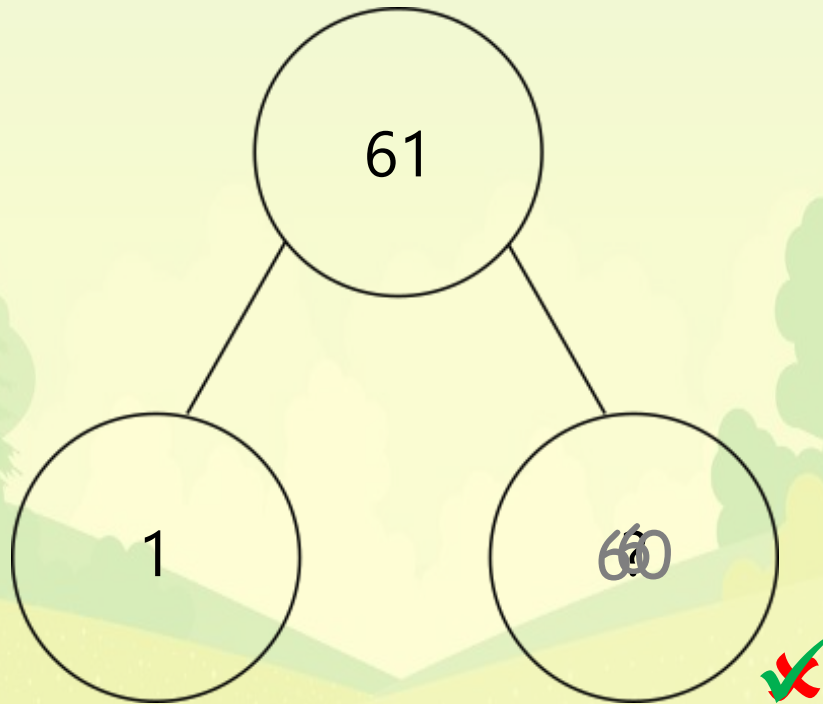
$$28 - 8 = 20$$



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Misconceptions:

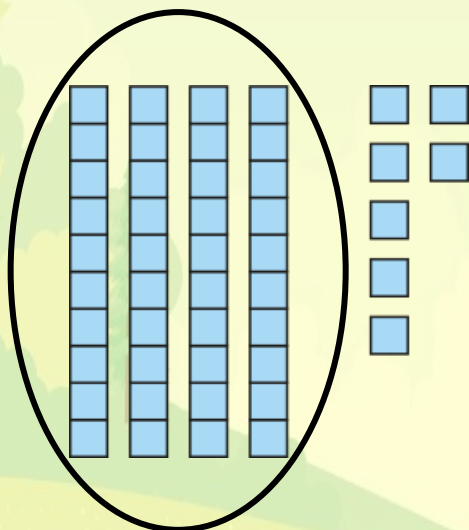


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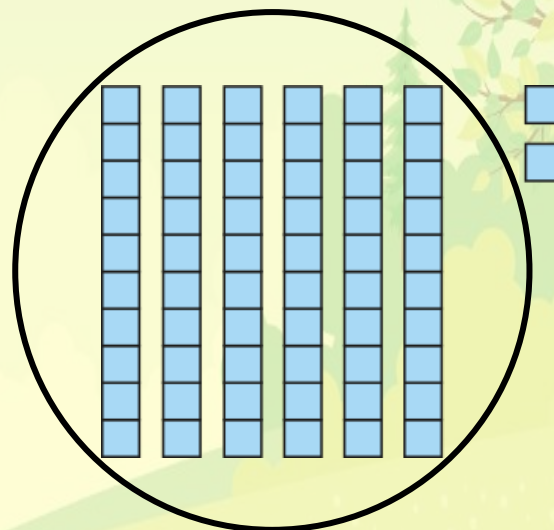
At Barrow Hedges, in maths, we work from **concrete** > pictorial > abstract representations.

47



four tens seven ones

62



six tens two ones



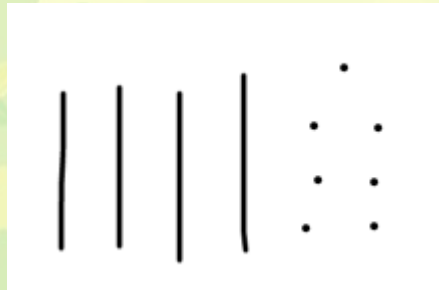
Starting with visual representations and manipulatives to represent two-digit numbers.

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At Barrow Hedges, in maths, we work from concrete > **pictorial** > abstract representations.

47



62

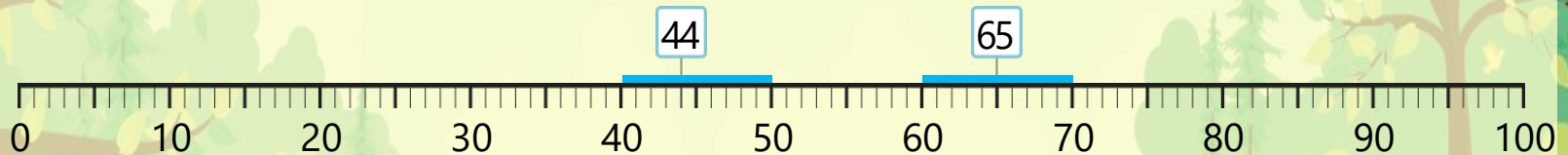


Using jottings to represent two-digit numbers.

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At Barrow Hedges, in maths, we work from concrete > pictorial > **abstract** representations.



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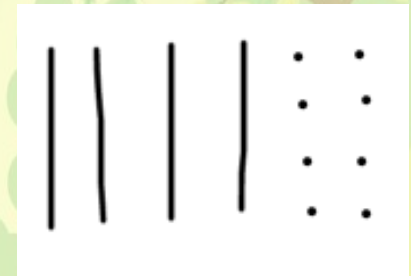
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Your turn... Can you use jottings to demonstrate how to represent the numbers below?

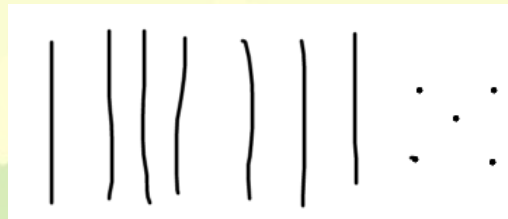
32



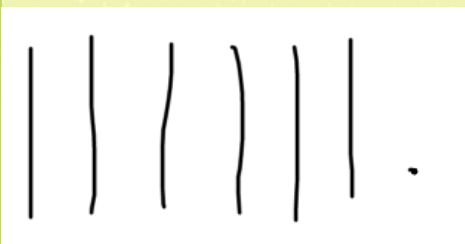
48



75




61

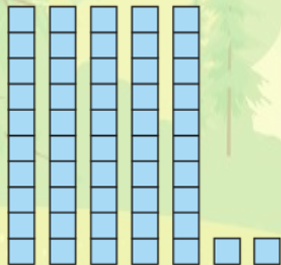


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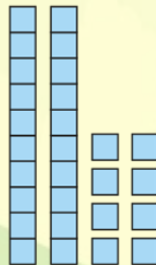
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I know that fifty-two is greater than twenty-eight because fifty-two has five tens sticks, and twenty-eight only has two tens sticks.



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Children are then given plenty of opportunity to use their knowledge of place value to reason and solve problems.



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Thank you for listening!

Any questions?

