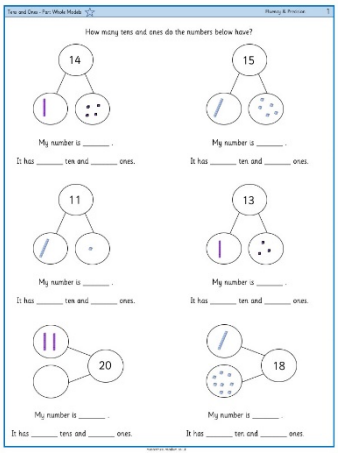
Lesson 4 – Tens and Ones - Part Whole Models

NC Objective:	Resources needed:	Vocabulary:
Identify and represent numbers using objects and pictorial representations including the number line Read and write numbers from 1 to 20 in numerals and words	Differentiated Sheets Teaching Slides Concrete equipment	Tens, ones, equal, represents, count, greater, less, part-whole model

Children learn that each number from 11 – 19 has '1 ten and some more'. They will see 10 and 20 as having jus t tens and no ones. Children still need to understand that numbers can be seen in different ways. Discuss 1 ten being equal to 10 ones. Base 10 can be used as concrete equipment and they draw them as 'sticks and bricks '. A line represents 1 ten and a dot represents 1 one.

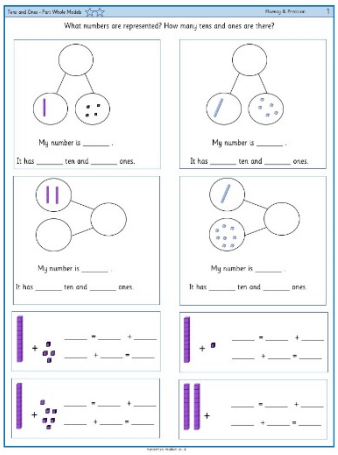
Key Questions:
What numbers come after 10? Which numbers have the 'teen' sound in them? What does the number ____ look like? Which is greater, 1 ten or 1 one? How do you know? What does 'teen' tell us about a number? Can y ou swap tens for ones? Will it change the amount? Explain. Do we need to count the 10 individually? Do we ne ed to start counting from 0 every time? Can you describe the number _____ using tens and ones?

★ Working Towards



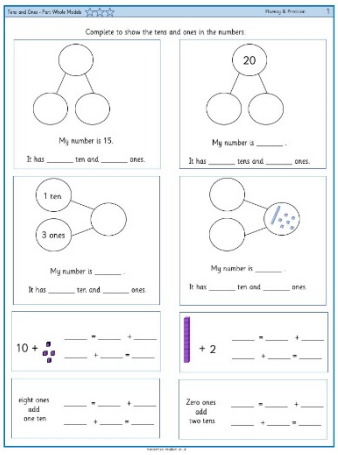
Children continue recognising the tens and ones in numbers up to 20. Children on this sheet are given the number with pictorial representation. They write the given number and identify the tens and ones in that number.

★★ Working Within



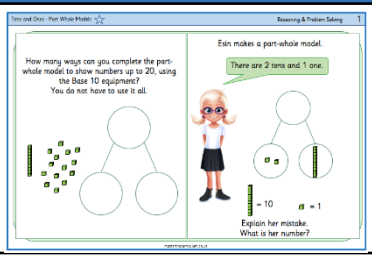
Children on this sheet have pictorial representations. They identify the tens and ones and complete the part whole model. They then have visuals without the part whole model and identify what number is represented in its tens and ones.

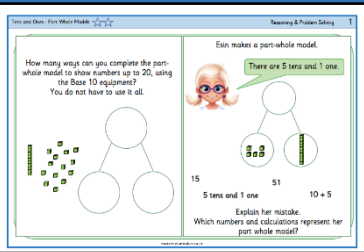
★★★ Greater Depth

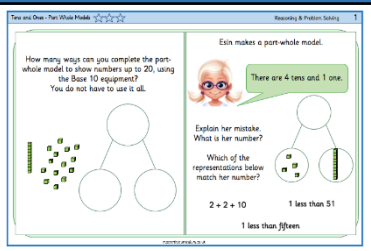


Children on this sheet are to fill in all of the missing parts to the part whole model, using the given parts as clues to what is needed. Children may draw or represent the parts in numbers. They also have a partitioned number written in words and are to complete the number sentence in numerals.

Reasoning & Problem Solving

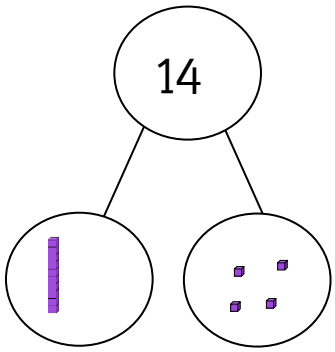






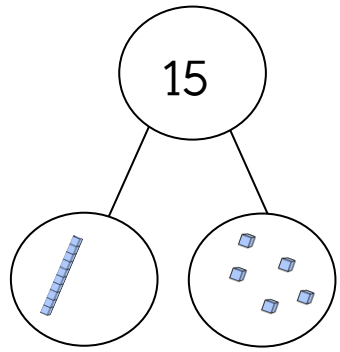
Children will solve reasoning questions using part whole models and numbers to 20.

How many tens and ones do the numbers below have?



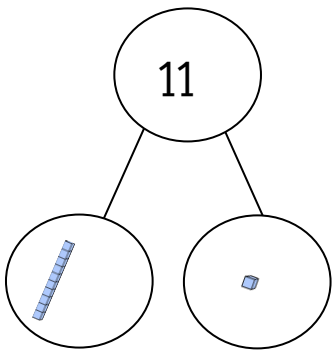
My number is _____ .

It has _____ ten and _____ ones.



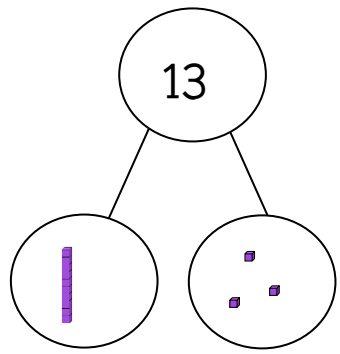
My number is _____ .

It has _____ ten and _____ ones.



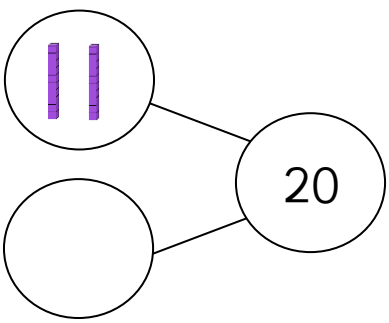
My number is _____ .

It has _____ ten and _____ ones.



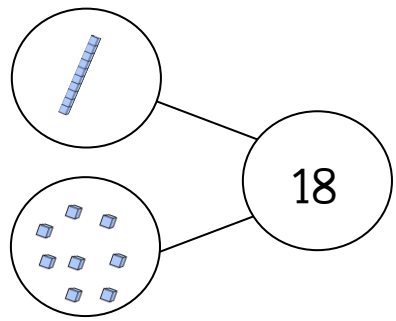
My number is _____ .

It has _____ ten and _____ ones.



My number is _____ .

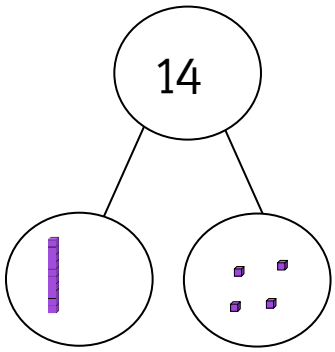
It has _____ tens and _____ ones.



My number is _____ .

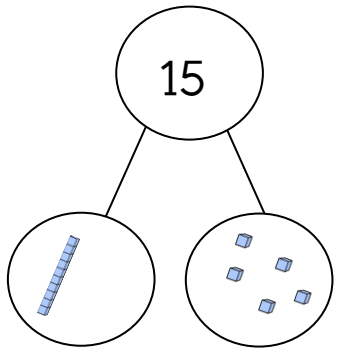
It has _____ ten and _____ ones.

How many tens and ones do the numbers below have?



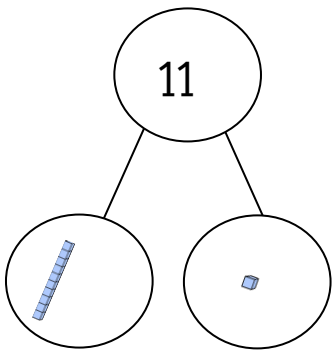
My number is 14 .

It has 1 ten and 4 ones.



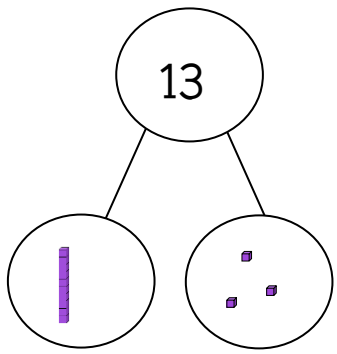
My number is 15 .

It has 1 ten and 5 ones.



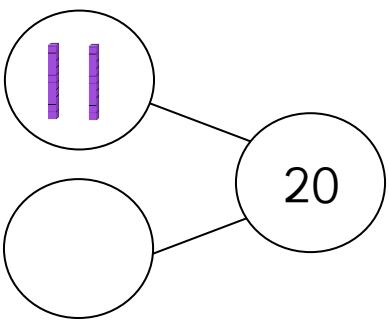
My number is 11 .

It has 1 ten and 1 ones.



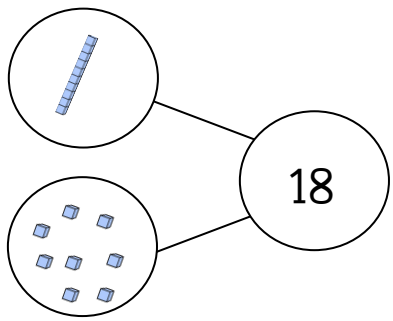
My number is 13 .

It has 1 ten and 3 ones.



My number is 20 .

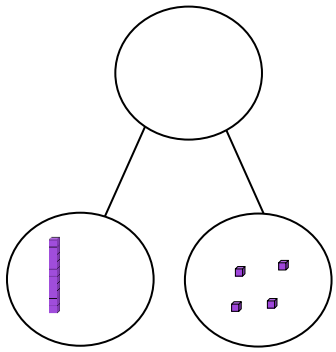
It has 2 tens and 0 ones.



My number is 18 .

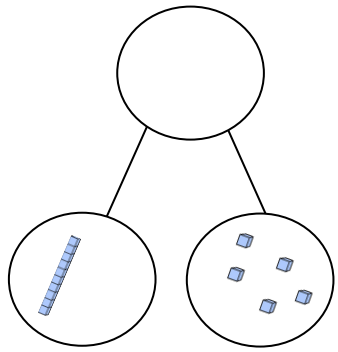
It has 1 ten and 8 ones.

What numbers are represented? How many tens and ones are there?



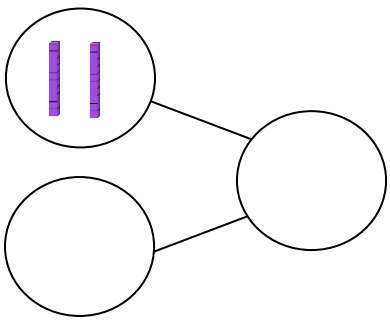
My number is _____ .

It has _____ ten and _____ ones.



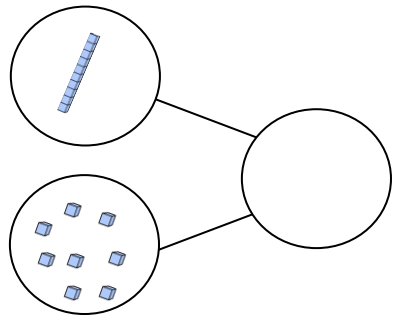
My number is _____ .

It has _____ ten and _____ ones.



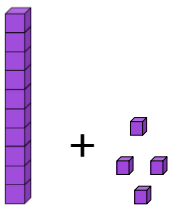
My number is _____ .

It has _____ ten and _____ ones.



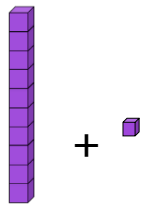
My number is _____ .

It has _____ ten and _____ ones.



_____ = _____ + _____

_____ + _____ = _____



_____ = _____ + _____

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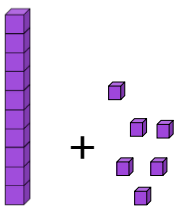
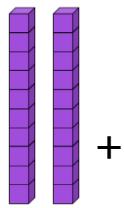


_____ = _____ + _____

_____ + _____ = _____



_____ = _____ + _____

_____ + _____ = _____

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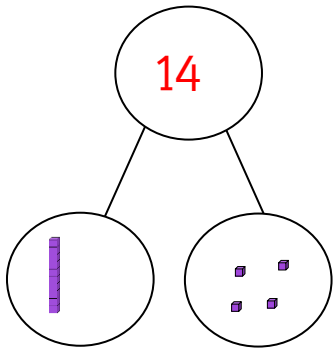

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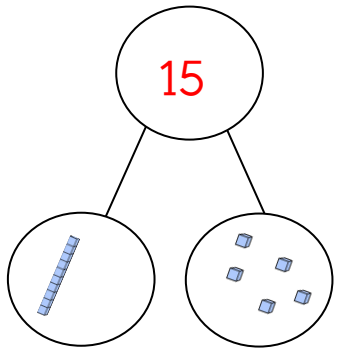

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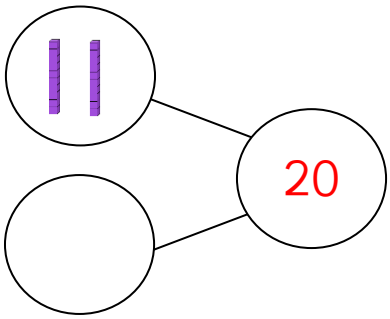
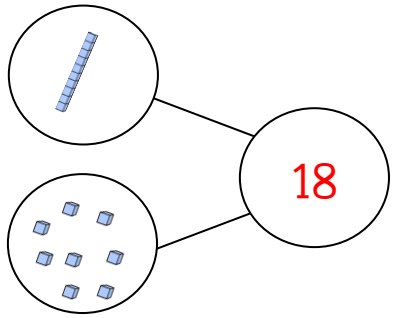


My number is 20 .

It has 2 ten and 0 ones.



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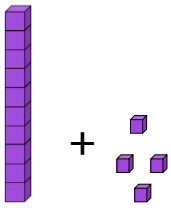
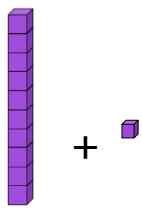


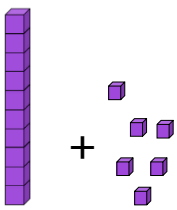
14 = 10 + 4

10 + 4 = 14



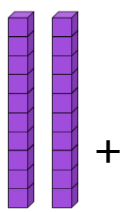
11 = 10 + 1

10 + 1 = 11



16 = 10 + 6

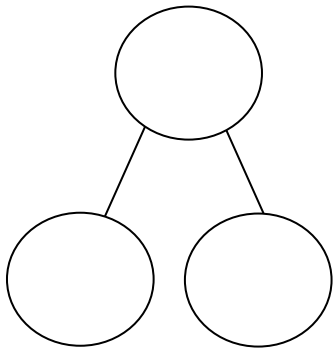
10 + 6 = 16



20 = 20 + 0

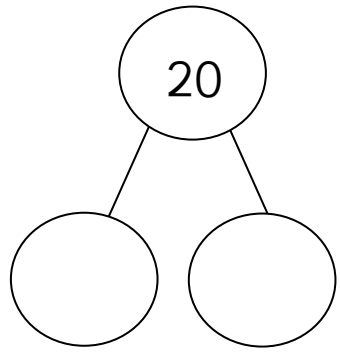
20 + 0 = 20

Complete to show the tens and ones in the numbers.



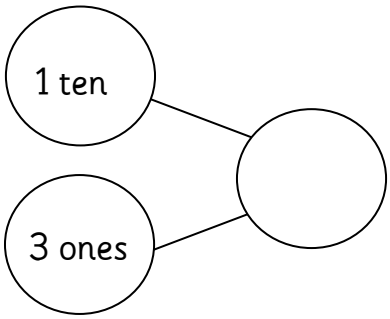
My number is 15.

It has _____ ten and _____ ones.



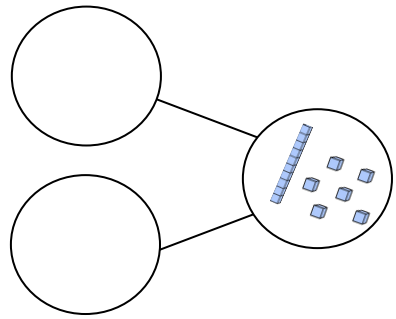
My number is _____ .

It has _____ tens and _____ ones.



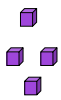
My number is _____ .

It has _____ ten and _____ ones.



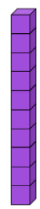
My number is _____ .

It has _____ ten and _____ ones.

10 + 

_____ = _____ + _____

_____ + _____ = _____

 + 2

_____ = _____ + _____

_____ + _____ = _____

eight ones
add
one ten

_____ = _____ + _____

_____ + _____ = _____

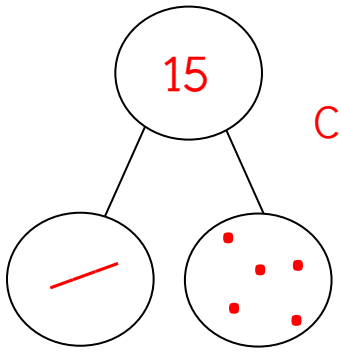
Zero ones
add
two tens

_____ = _____ + _____

_____ + _____ = _____

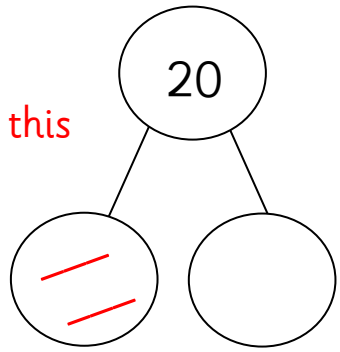
Complete to show the tens and ones in the numbers.

Examples:
Children may represent this in numerals.



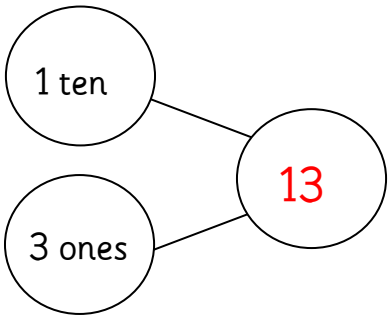
My number is 15.

It has 1 ten and 5 ones.



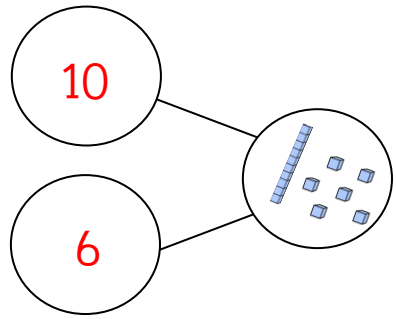
My number is 20.

It has 2 tens and 0 ones.



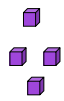
My number is 13.

It has 1 ten and 3 ones.



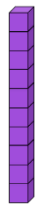
My number is 16.

It has 1 ten and 6 ones.



10 + 14 = 10 + 4

10 + 4 = 14



+ 2

12 = 10 + 2

10 + 2 = 12

eight ones add one ten

18 = 10 + 8

10 + 8 = 18

Zero ones add two tens

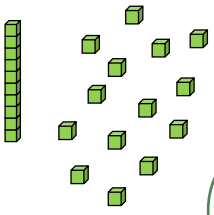
20 20 0

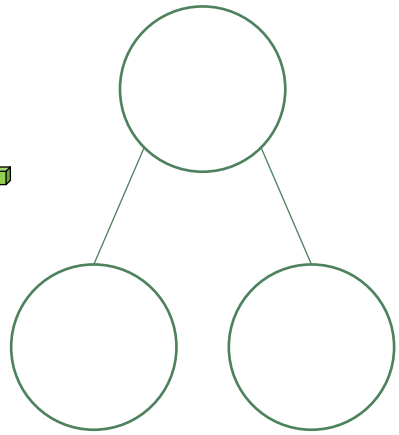
20 = 10 + 10

10 + 10 = 20

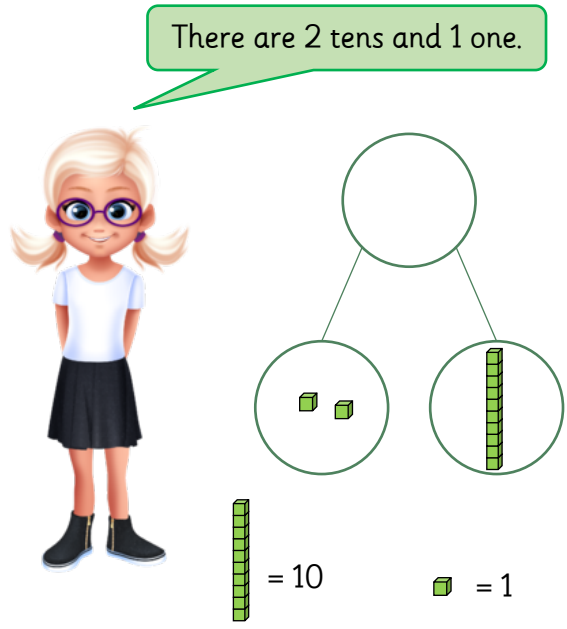
20 0 20

How many ways can you complete the part-whole model to show numbers up to 20, using the Base 10 equipment?
You do not have to use it all.





Esin makes a part-whole model.

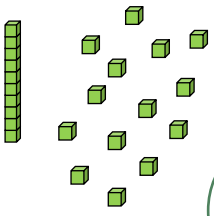


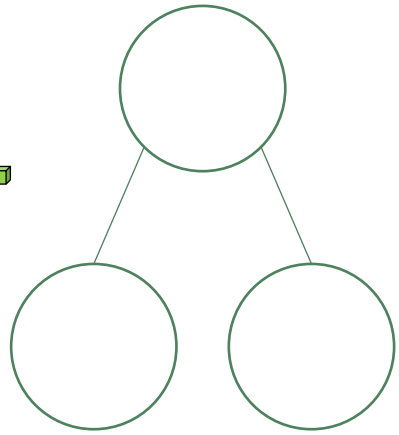
= 10 = 1

Explain her mistake.
What is her number?

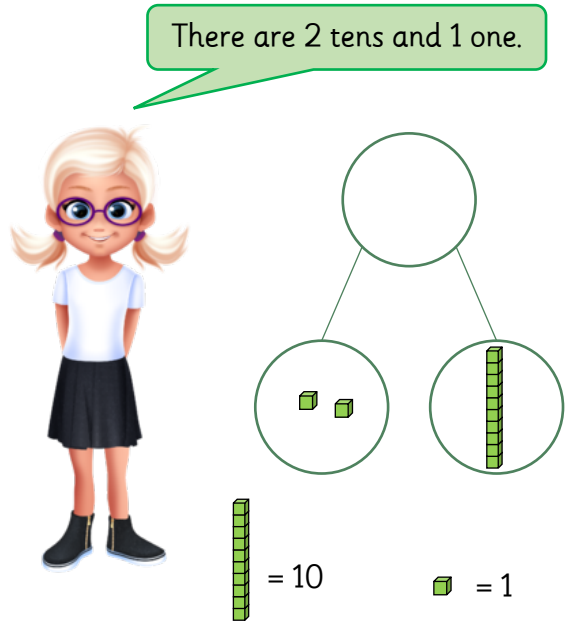
Tens and Ones - Part Whole Models ☆ Reasoning & Problem Solving 1

How many ways can you complete the part-whole model to show numbers up to 20, using the Base 10 equipment?
You do not have to use it all.





Esin makes a part-whole model.



= 10 = 1

Explain her mistake.
What is her number?

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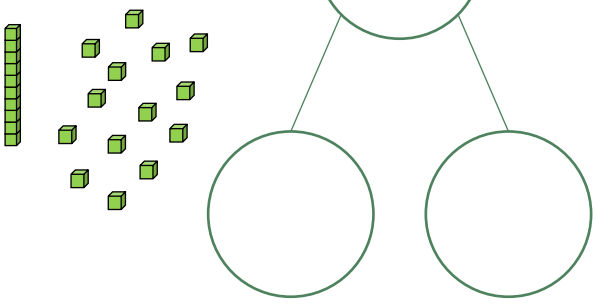

Open ended e.g. 1 ten and 8 ones make 18.

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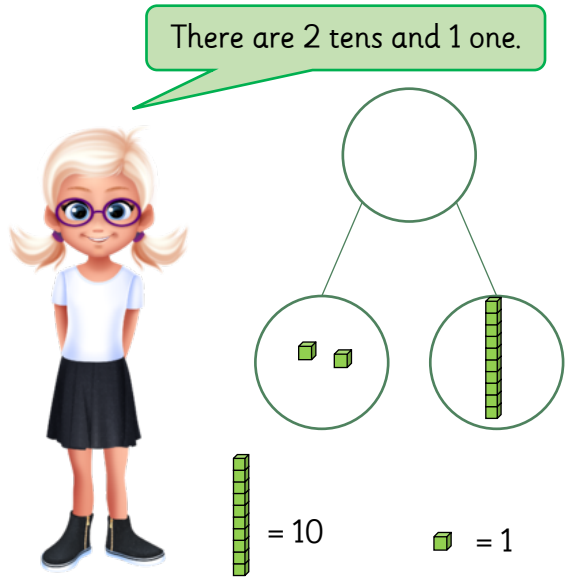

Esin has counted the ones as tens and the tens as ones.
She should say there is 1 ten and 2 ones.
Her number is 12.

Tens and Ones - Part Whole Models ☆ Answers Reasoning & Problem Solving 1

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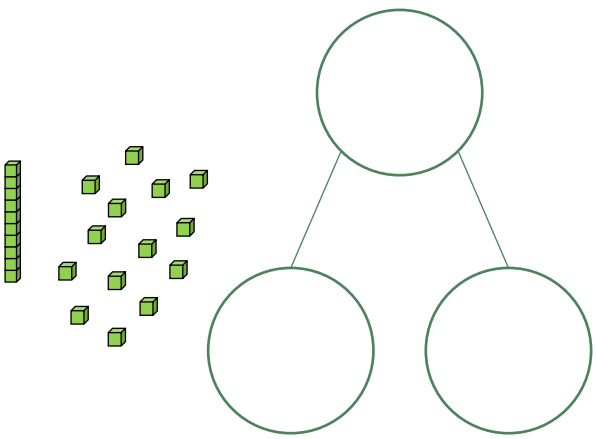

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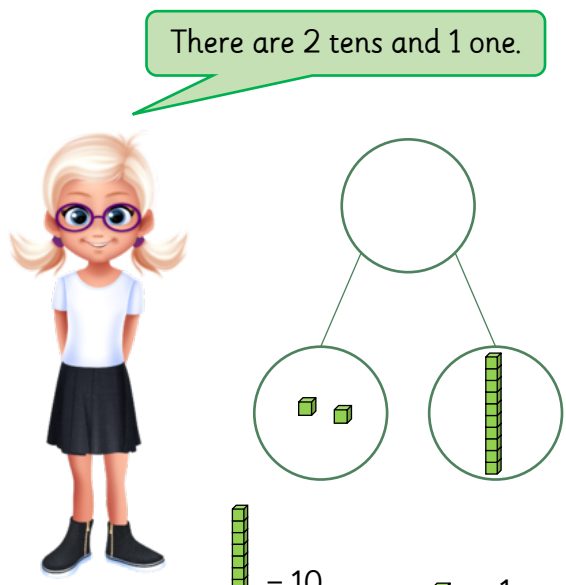

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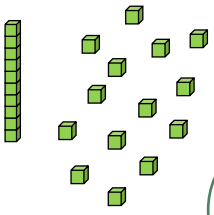

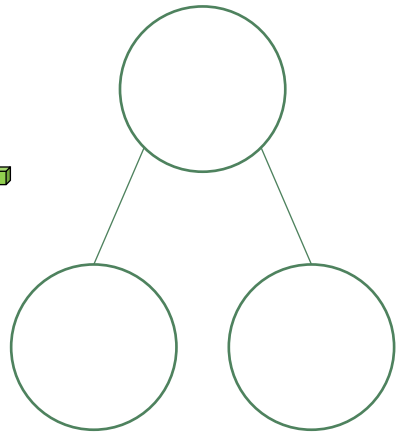

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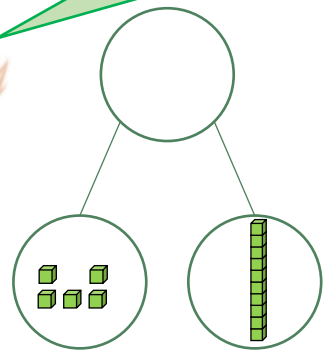

15

51

5 tens and 1 one

10 + 5

Explain her mistake.
Which numbers and calculations represent her part whole model?

Tens and Ones - Part Whole Models ☆☆ Reasoning & Problem Solving 1

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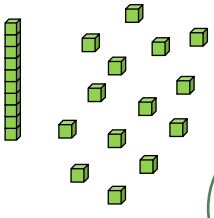

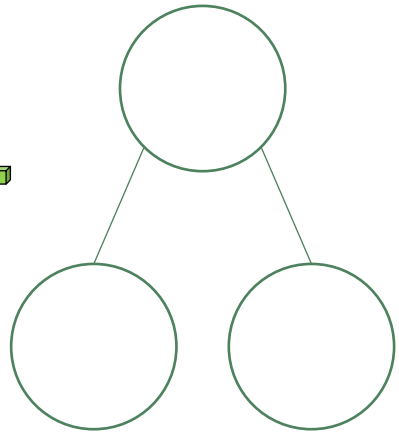

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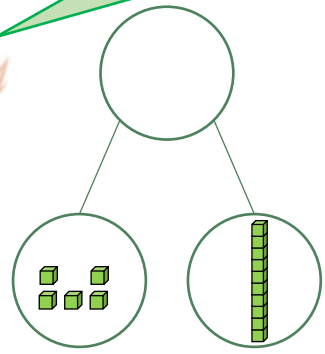

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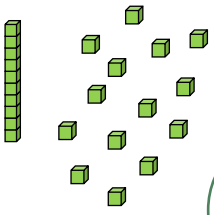

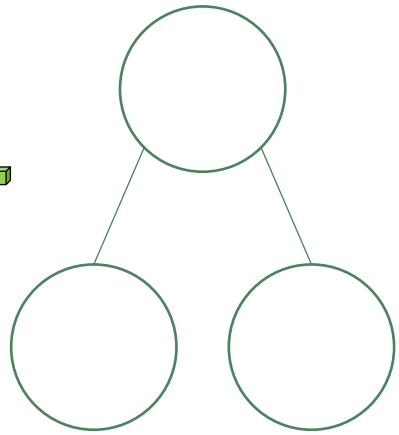

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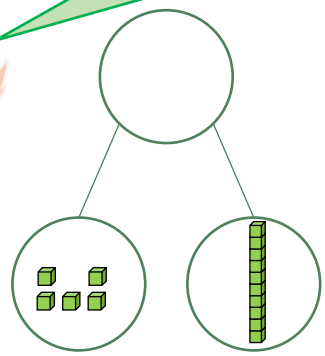

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Tens and Ones - Part Whole Models ☆☆ Answers Reasoning & Problem Solving 1

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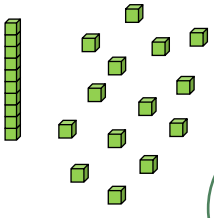

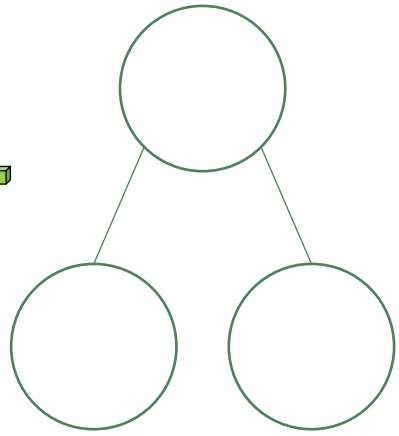

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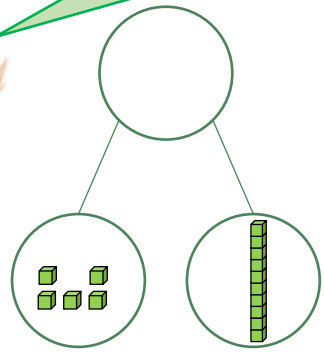

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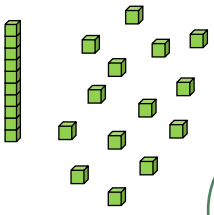
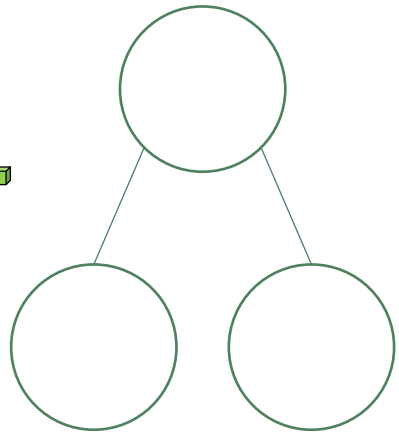


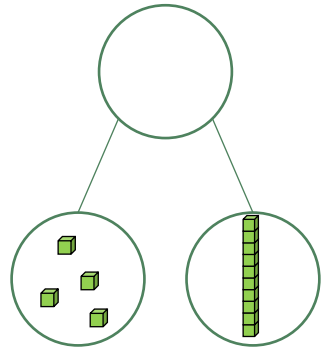


Esin makes a part-whole model.

There are 4 tens and 1 one.

Explain her mistake.
What is her number?

Which of the representations below match her number?



2 + 2 + 10

1 less than 51

1 less than fifteen

Tens and Ones - Part Whole Models ☆☆☆ Reasoning & Problem Solving 1

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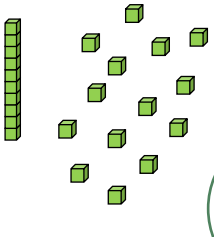

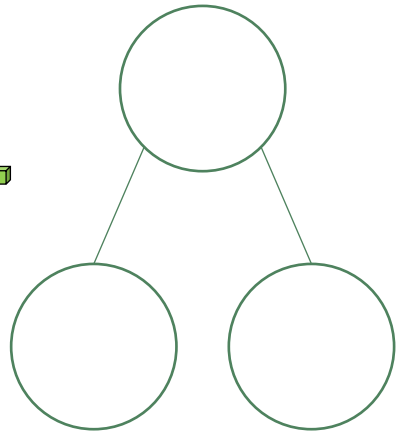

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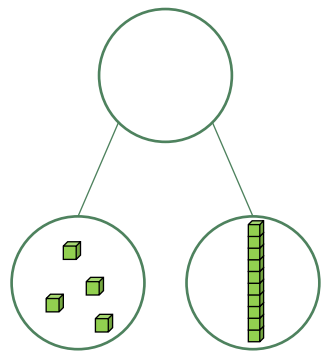

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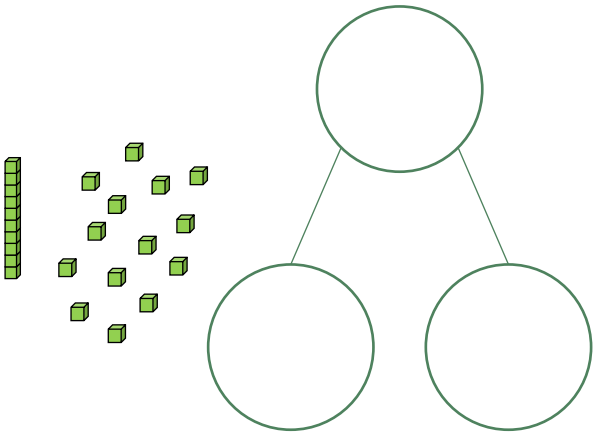

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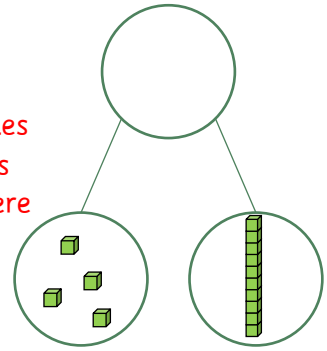

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