

Reasoning and Problem Solving

Step 1: Count Objects to 100

National Curriculum Objectives:

Mathematics Year 2: (2N2a) [Read and write numbers to at least 100 in numerals and in words.](#)

Mathematics Year 2: (2N3) [Recognise the place value of each digit in a two digit number \(tens, ones\)](#)

Mathematics Year 2: (2N4) [Identify, represent and estimate numbers using different representations including the number line.](#)

Differentiation:

Questions 1, 4 and 7 (Reasoning)

Developing Recognise and explain the pictorial representation of tens and ones using Base 10. Use of numbers up to 50.

Expected Recognise and explain the pictorial representation of tens and ones using Base 10. Use of numbers up to 100.

Greater Depth Recognise and explain the pictorial representation of hundreds, tens and ones using Base 10. Use of numbers up to 110.

Questions 2, 5 and 8 (Problem Solving)

Developing Identify the largest number from a selection of 4. Counting Base 10 up to 50.

Expected Identify the largest number from a selection of 4. Count Base 10 up to 100.

Greater Depth Identify the largest number from a selection of 4. Counting a mixture of Base 10, Numicon and straw bundles up to 110.

Questions 3, 6 and 9 (Reasoning)

Developing Identify and explain errors within a pictogram with images representing 10 and 1. Use of numbers up to 50.

Expected Identify and explain errors within a pictogram with images representing 10 and 1. Use of numbers up to 100.

Greater Depth Identify and explain errors within a pictogram with images representing 10 and 1. Use of numbers up to 110.

More [Year 2 Place Value](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

Count Objects to 100

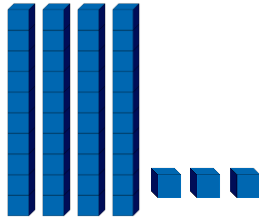
Count Objects to 100

1a. Do you agree with Samuel?



Samuel

The Base 10 shows the number 34.



Explain why.



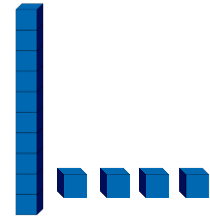
R

1b. Do you agree with Lara?



Lara

The Base 10 shows the number 41.

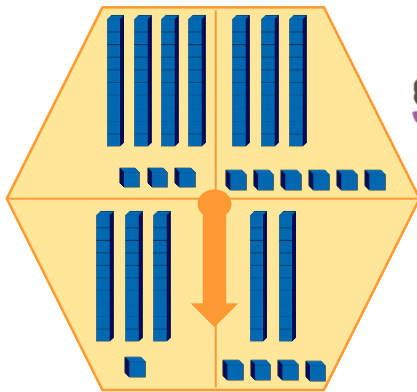


Explain why.



R

2a. If Hannah spins the highest number on her spinner, what will the number be?

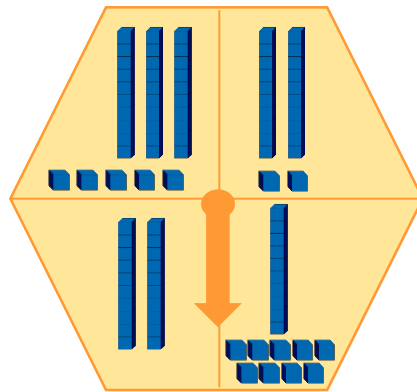


Hannah



PS

2b. If Koby spins the highest number on his spinner, what will the number be?



Koby



PS

3a. Tim and his friends go paintballing.

= 10 splats = 1 splat

Gary		43
Tim		22
Zara		41
Katy		32

Find and explain the errors in Tim's pictogram.



R

3b. Pria and her friends have finished their times tables test.

= 10 correct answers = 1 correct answer

Mark		13
Pria		33
Sim		4
Karam		21

Find and explain the errors in Pria's pictogram.



R

Count Objects to 100

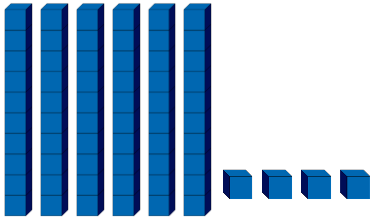
Count Objects to 100

4a. Do you agree with Rufus?



Rufus

The Base 10 shows the number 10.



Explain why.



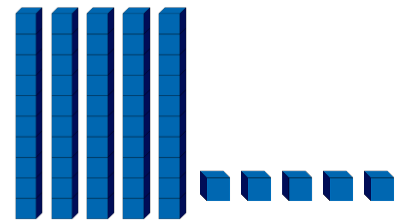
R

4b. Do you agree with Georgia?



Georgia

The Base 10 shows the number 55.

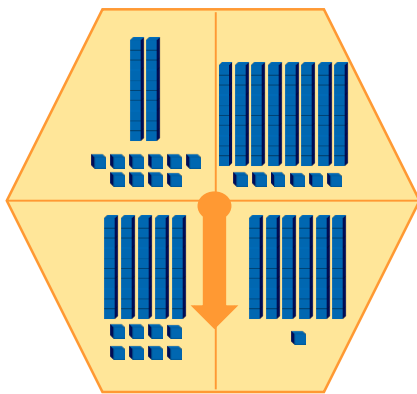


Explain why.



R

5a. If Holly spins the highest number on her spinner, what will the number be?

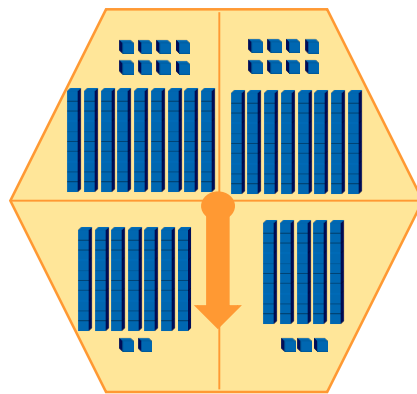


Holly



PS

5b. If Theo spins the highest number on his spinner, what will the number be?



Theo



PS

6a. Claire and her friends play a football match.

= 10 goals = 1 goal

Steve		61
Sarah		31
Seb		70
Sam		42

Find and explain the errors in Claire's pictogram.



R

6b. Nicky and her friends bake some biscuits.

= 10 biscuits = 1 biscuit

Paul		60
Sophie		72
Mark		52
Rylee		100

Find and explain the errors in Nicky's pictogram.



R

Count Objects to 100

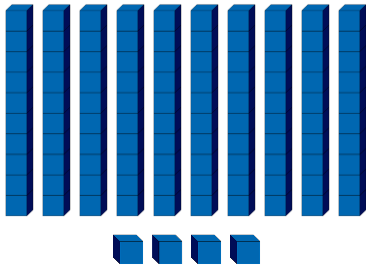
Count Objects to 100

7a. Do you agree with Theo?



Theo

The Base 10 shows the number 14.



Explain why.



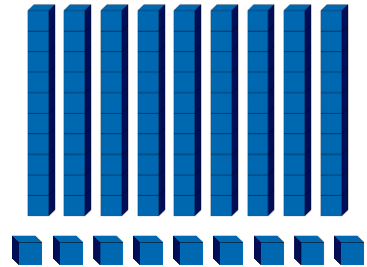
R

7b. Do you agree with the Imaan?



Imaan

The Base 10 shows the number 99.

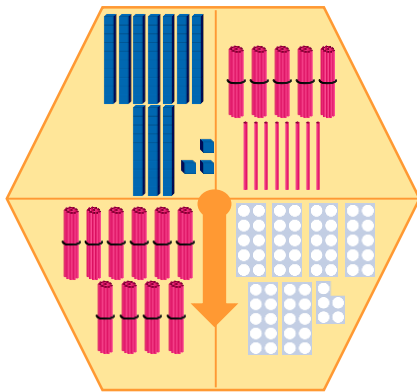


Explain why.



R

8a. If Fatima spins the highest number on her spinner, what will the number be?

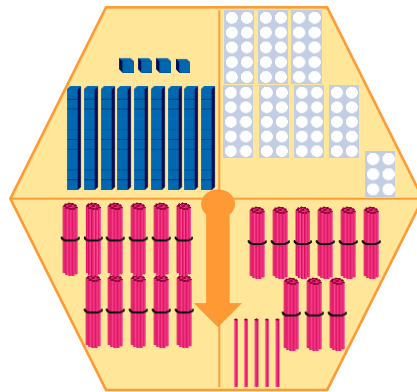


Fatima



PS

8b. If Kevin spins the highest number on his spinner, what will the number be?



Kevin



PS

9a. Hari and his friends have a spelling competition.

= 10 spellings correct = 1 spelling correct

Jane		34
Ryan		63
Dan		33
Hari		6

Find and explain the errors in Hari's pictogram.



R

9b. Maya and her friends have been bowling.

= 10 skittles = 1 skittle

Bonni		101
Maya		63
Fin		80
Bobby		12

Find and explain the errors in Maya's pictogram.



R

Reasoning and Problem Solving Count Objects to 100

Developing

- 1a. Samuel is incorrect. The Base 10 shows the number 43 as there are 4 tens and 3 ones.
- 2a. The highest number Hannah can spin is 43.
- 3a. The number for Gary is incorrect as the pictogram shows 3 tens and 4 ones which makes 34, not 43. The number for Zara is also incorrect as the pictogram shows 1 ten and 4 ones which makes 14, not 41.

Expected

- 4a. Rufus is incorrect. The Base 10 shows the number 64 as there are 6 tens and 4 ones.
- 5a. The highest number Holly can spin is 86.
- 6a. The number for Steve is incorrect as the pictogram shows 1 ten and 6 ones which makes 16, not 61. The number for Sam is also incorrect as the pictogram shows 2 tens and 4 ones which makes 24, not 42.

Greater Depth

- 7a. Theo is incorrect. The Base 10 shows the number 104 as there are 10 tens and 4 ones.
- 8a. The highest number Fatima can spin is 103.
- 9a. The number for Jane is incorrect as the pictogram shows 4 tens and 3 ones which makes 43, not 34. The number for Hari is also incorrect as the pictogram shows 6 tens which makes 60, not 6.

Reasoning and Problem Solving Count Objects to 100

Developing

- 1b. Lara is incorrect. The Base 10 shows the number 14 as there is 1 ten and 4 ones.
- 2b. The highest number Koby can spin is 35.
- 3b. The number for Mark is incorrect as the pictogram shows 2 tens and 3 ones which makes 23, not 13. The number for Karam is also incorrect as the pictogram shows 1 ten and 2 ones which makes 12, not 21.

Expected

- 4b. Georgia is correct. The Base 10 shows the number 55 as there are 5 tens and 5 ones.
- 5b. The highest number Theo can spin is 98.
- 6b. The number for Sophie is incorrect as the pictogram shows 2 tens and 7 ones which makes 27, not 72. The number for Rylee is also incorrect as it shows 10 ones which makes 10, not 100.

Greater Depth

- 7b. Imaan is correct. The Base 10 shows the number 99 as there are 9 tens and 9 ones.
- 8b. The highest number Kevin can spin is 110.
- 9b. The number for Fin is incorrect as the pictogram shows 4 tens and 4 ones which makes 44, not 80. The number for Bobby is also incorrect as the pictogram shows 10 tens and 2 ones which makes 102, not 12.