

Reasoning and Problem Solving

Step 2: 3-digit Numbers and Ones

National Curriculum Objectives:

Mathematics Year 3: (3C1) [Add and subtract numbers mentally, including three-digit number and ones](#)

Differentiation:

Questions 1, 4 and 7 (Problem Solving)

Developing One-step problem adding or subtracting ones from a 3-digit numbers using Base 10.

Expected One-step problem adding or subtracting ones from a 3-digit numbers using place value counters.

Greater Depth One-step problem adding or subtracting ones from a 3-digit numbers. Statement written as words and unconventional partitioning.

Questions 2, 5 and 8 (Problem Solving)

Developing Investigate one 1-digit and 3-digit addition and subtraction number sentence (with no exchanges) that can be created using the place value cards. Cards presented using Base 10.

Expected Investigate one 1-digit and 3-digit addition and subtraction number sentence (with no exchanges) that can be created using the place value cards in a place value chart. Cards presented using place value counters.

Greater Depth Investigate all the 1-digit and 3-digit addition and subtraction number sentences (with no exchanges) that can be created using the digit cards. Cards presented with numbers only.

Questions 3, 6 and 9 (Reasoning)

Developing Explain whether the statement has been written correctly. Statement written using Base 10 and numbers.

Expected Explain whether the statement has been written correctly. Statement written using place value counters and words.

Greater Depth Explain whether the statement has been written correctly. Statement written using words only and unconventional partitioning.

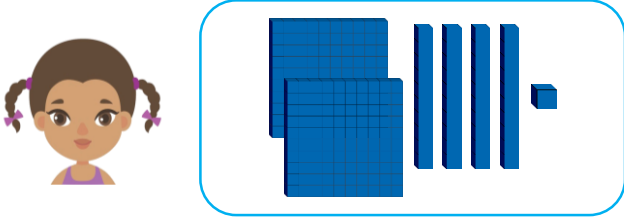
More [Year 3 Addition and Subtraction](#) resources.

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

3-digit Numbers and Ones

3-digit Numbers and Ones

1a. Alison is representing a number using Base 10.



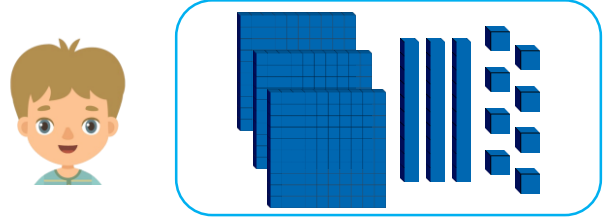
She adds an even number of ones.

Write down all the numbers she could be left with.



PS

1b. Edward is representing a number using Base 10.



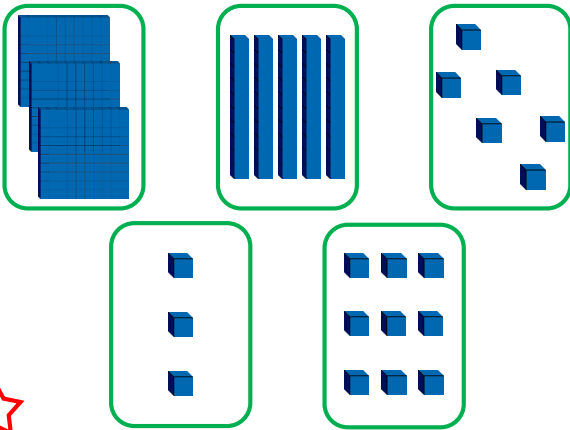
He subtracts an even number of ones.

Write down all the numbers he could be left with.



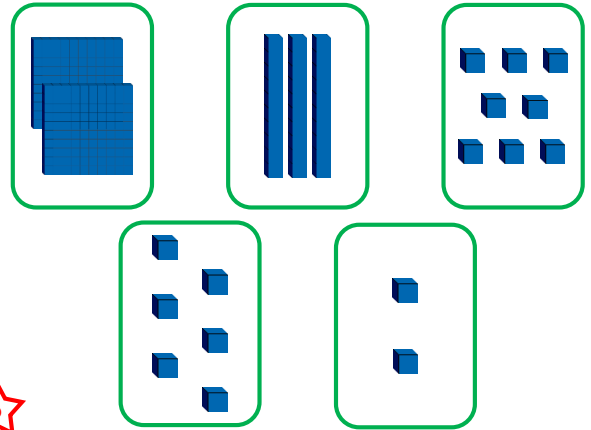
PS

2a. Use the place value cards to create an addition and subtraction number sentence with no exchanges. You can use a card more than once.



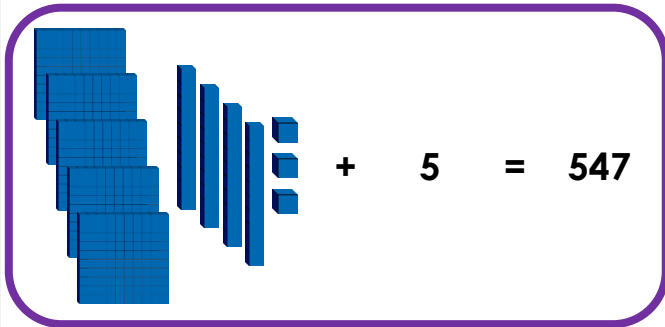
PS

2b. Use the place value cards to create an addition and subtraction number sentence with no exchanges. You can use a card more than once.



PS

3a. Warren has written this number sentence:

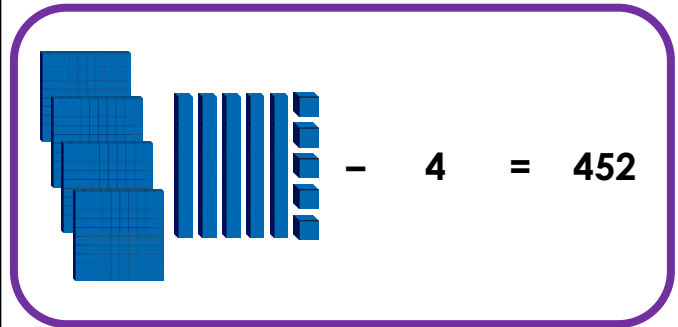


Is he correct? Explain your answer.



R

3b. Rachel has written this number sentence:



Is she correct? Explain your answer.

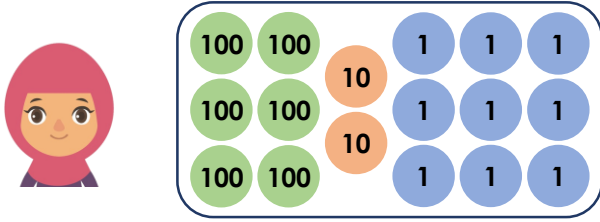


R

3-digit Numbers and Ones

3-digit Numbers and Ones

4a. Azra is representing a number using place value counters.



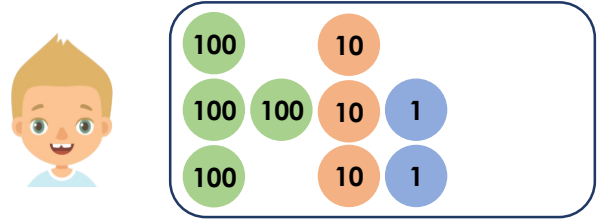
She subtracts an even number of ones counters.

Write down all the numbers in words she could be left with.



PS

4b. Cole is representing a number using place value counters.



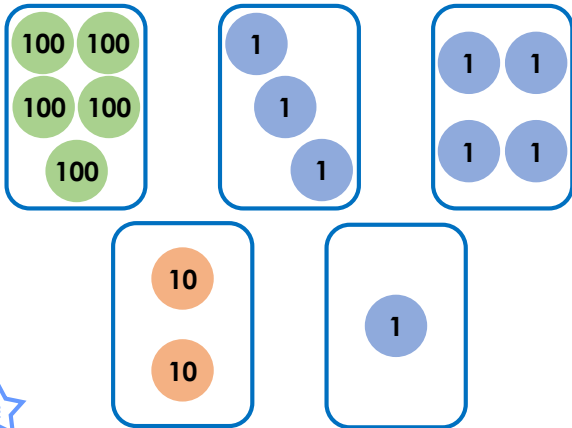
He adds an even number of ones counters.

Write down all the numbers in words he could be left with.



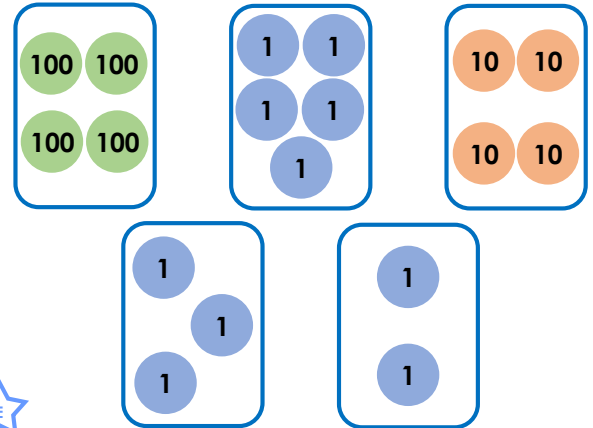
PS

5a. Use the place value cards to create an addition and subtraction number sentence with no exchanges. Record your calculations in a place value chart.



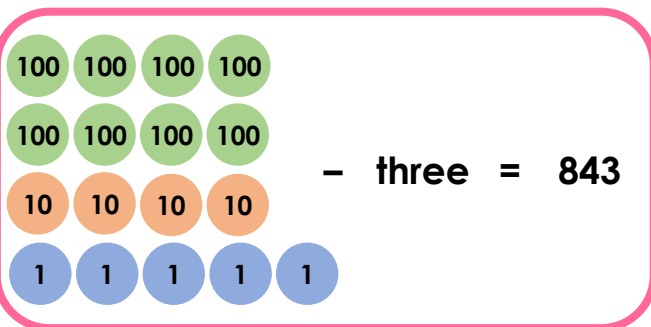
PS

5b. Use the place value cards to create an addition and subtraction number sentence with no exchanges. Record your calculations in a place value chart.



PS

6a. Marcus has written this number sentence:

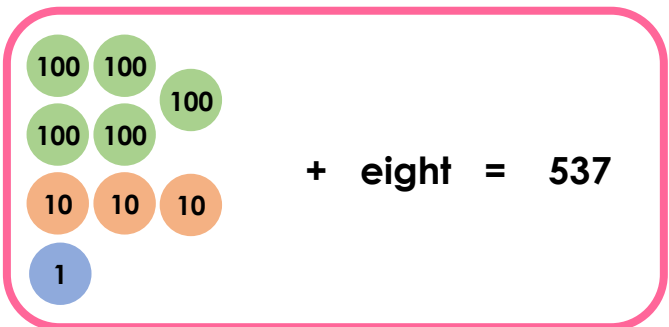


Is he correct? Explain your answer.



R

6b. Julia has written this number sentence:



Is she correct? Explain your answer.



R

3-digit Numbers and Ones

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7a. Jane has written this number:



8 hundreds, 12
tens and 11 ones.

She adds an even number of ones.

Write down all the numbers in words she
could be left with.



PS

7b. Klaus has written this number:



7 hundreds, 15
tens and 29 ones.

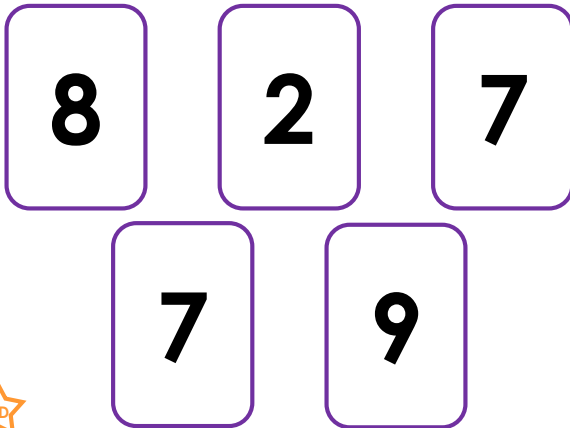
He subtracts an even number of ones.

Write down all the numbers in words he
could be left with.



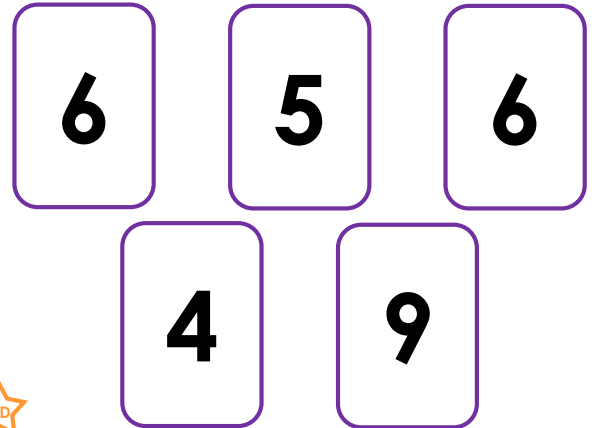
PS

8a. Use the digit cards to create two
addition and two subtraction number
sentence with no exchanges. You can
use a card more than once.



PS

8b. Use the digit cards to create two
addition and two subtraction number
sentence with no exchanges. You can
use a card more than once.



PS

9a. Hope has written this number
sentence:

eight
hundred + six = eight
and two hundred and nine

Is she correct? Explain your answer.



R

9b. Mateo has written this number
sentence:

six
hundreds, + five = seven
11 tens hundred
and four and
nineteen

Is he correct? Explain your answer.



R

Reasoning and Problem Solving 3-digit Numbers and Ones

Developing

1a. 243; 245; 247; 249

2a. Various answers, for example:

$$353 + 6 = 359; 359 - 6 = 353$$

3a. No. Warren is incorrect because $543 + 5 = 548$

Expected

4a. six hundred and twenty-seven; six hundred and twenty-five; six hundred and twenty-three; six hundred and twenty-one

5a. Various answers, for example:

$$523 + 1 = 524; 524 - 3 = 521$$

6a. No. Marcus is incorrect because $845 - 3 = 842$

Greater Depth

7a. nine hundred and thirty-three; nine hundred and thirty-five; nine hundred and thirty-seven; nine hundred and thirty-nine

8a. Various answers, for example:

$$872 + 7 = 879; 879 - 2 = 877$$

9a. No. Hope is incorrect because eight hundred and two + six = eight hundred and eight

Reasoning and Problem Solving 3-digit Numbers and Ones

Developing

1b. 336; 334; 332; 330

2b. Various answers, for example:

$$236 + 2 = 238; 238 - 2 = 236$$

3b. No. Rachel is incorrect because $455 - 4 = 451$

Expected

4b. four hundred and thirty-one; four hundred and thirty-three; four hundred and thirty-five; four hundred and thirty-seven; four hundred and thirty-nine

5b. Various answers, for example:

$$443 + 2 = 445; 445 - 3 = 442$$

6b. No. Julia is incorrect because $531 + \text{eight} = 539$

Greater Depth

7b. eight hundred and seventy-seven; eight hundred and seventy-five; eight hundred and seventy-three; eight hundred and seventy-one

8b. Various answers, for example:

$$665 + 4 = 669; 669 - 5 = 664$$

9b. Yes. Mateo is correct because seven hundred and fourteen + five = seven hundred and nineteen