Varied Fluency
Step 10: 2-Digit and 3-Digit Numbers

National Curriculum Objectives:

Mathematics Year 3: (3C2) Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction
Mathematics Year 3: (3C4) Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction

Differentiation:

Questions 1, 4 and 7 (Reasoning)
Developing Explain whether a given statement is correct. Pictorial support given using Base 10.
Expected Explain whether a given statement is correct. Pictorial support given using a place value grid and counters.
Greater Depth Explain whether a given statement is correct. Pictorial representation with mixed representations given with unconventional partitioning.

Questions 2, 5 and 8 (Problem Solving)
Developing Create a word problem based on a representation of a 3-digit number and a 2-digit number. Pictorial support given using Base 10.
Expected Create a word problem based on a column method representation of a 3-digit number and a 2-digit number. Pictorial support given with place value headings.
Greater Depth Create a word problem based on a column method representation of a 3-digit number and a 2-digit number. Pictorial support given without place value headings.

Questions 3, 6 and 9 (Reasoning)
Developing Explain whether a given statement about an error is correct. Pictorial support given using Base 10.
Expected Explain whether a given statement about an error is correct. Pictorial support given using a place value grid and counters.
Greater Depth Explain whether a given statement about an error is correct. Pictorial representation given using a place value grid with mixed representations and unconventional partitioning.
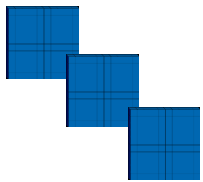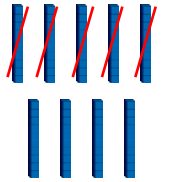
More Year 3 Addition and Subtraction resources.

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1a. Zubair says the mistake in the representation below is that there are too many tens.
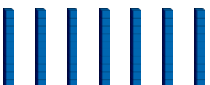
396 – 55 = 341
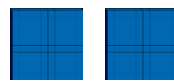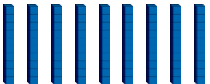
H	T	O
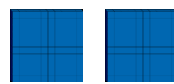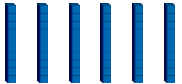
Do you agree? Explain.

R

1b. Evie says the mistake in the representation below is that the 3-digit number is wrong.

262 + 37 = 299

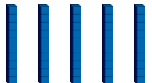| H	T	O

Do you agree? Explain.

R
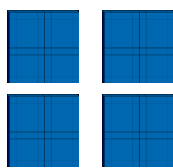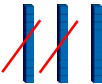
2a. Create a word problem to match this representation.

H	T	O

PS
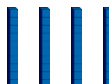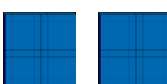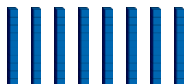
2b. Create a word problem to match this representation.

H	T	O

PS

3a. Jakub thinks that 38 + 241 = 283 is represented below.

H	T	O
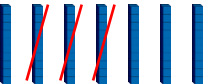
Is he correct? Explain your answer.

R

3b. Geeta thinks that 275 – 43 = 232 is represented below.

H	T	O

Is she correct? Explain your answer.

R

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Reasoning and Problem Solving – 2-Digit and 3-Digit Numbers – Year 3 Developing

4a. Natalia says the mistake in the representation below is that the wrong number of tens and ones have been subtracted.

two hundred and forty-six subtract thirty-two equals two hundred and thirteen

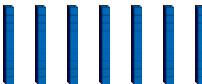| H	T	O

Do you agree? Explain.

4b. Adam says the mistake in the representation below is that the tens and ones digits have been swapped over.

sixty-seven add three hundred and twenty-three equals three hundred and eighty-nine

H	T	O

Do you agree? Explain.

5a. Create a word problem to match this column method representation.

	H	T	O
		4	7
+	1	2	1
	1	6	8

5b. Create a word problem to match this column method representation.

	H	T	O
	5	6	8
–		4	5
	5	2	3

6a. Lena thinks that 47 + 121 = 168 is represented below.

H	T	O

Is she correct? Explain your answer.

6b. Vladimir thinks that 483 – 72 = 411 is represented below.

H	T	O

Is he correct? Explain your answer.

Reasoning and Problem Solving – 2-Digit and 3-Digit Numbers – Year 3 Expected

7a. Blake says the mistake in the representation below is that too many tens have been subtracted.

four hundreds, five tens and six ones minus four tens and four ones equals four hundreds, one ten and two ones

H	T	O

Do you agree? Explain.

R
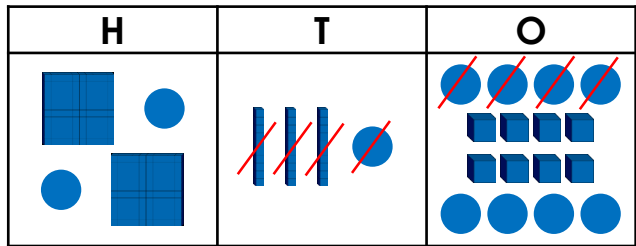
7b. Julia says the mistake in the representation below is that there are too many ones.

two hundreds, six tens and three ones plus one ten and sixteen ones equals two hundreds, seven tens and nineteen ones

H	T	O

Do you agree? Explain.

R
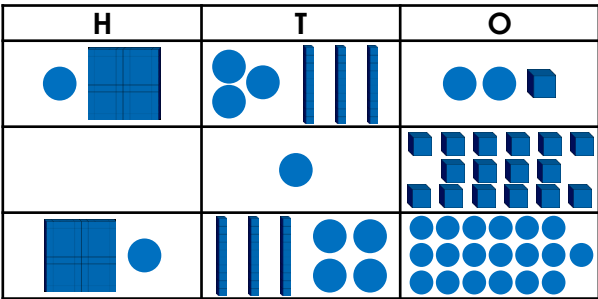
8a. Create a word problem to match this column method representation.

		5	3
+	5	4	5
	5	9	8

PS

8b. Create a word problem to match this column method representation.

	3	5	8
−		3	6
	3	2	2

PS

9a. Dai thinks that three tens and twelve ones plus six hundreds, one ten and four ones equals six hundreds, five tens and six ones is represented below.

H	T	O
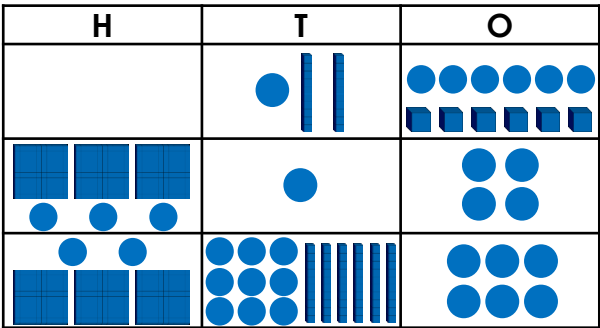
Is he correct? Explain your answer.

R

9b. Olivia thinks that two hundreds, thirteen tens and seven ones minus twenty-three ones is represented below.

H	T	O

Is she correct? Explain your answer.

R

Reasoning and Problem Solving
2-Digit and 3-Digit Numbers

Developing
1a. Zubair is wrong. The representation is correct.
2a. Various answers, for example: There are 125 children in our school. During the year another 54 children join. Altogether here are now 179 children in our school.
3a. No, the 3-digit number on the second row should have 2 hundreds.

Expected
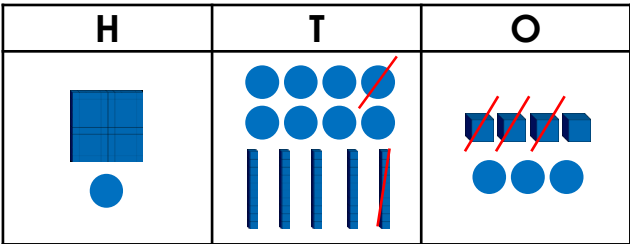**4a.** No, the correct number of tens and ones have been subtracted.
5a. Various answers, for example: A farmer has 47 ducks and 121 geese. Altogether she has 168 birds on her farm.
6a. No, in the 3-digit number the tens and ones digits have been swapped over. It should be 2 tens and 1 one.

Greater Depth
7a. No, the correct number of tens has been subtracted, but there weren't enough tens to begin with.
8a. Various answers, for example: Ava has scored 545 points on a computer game. She has another go and wins 53 more points. She now has 598 points in total.
9a. Dai is correct. The answer of 656 has been unconventionally partitioned into five hundreds, fifteen tens and six ones.

Reasoning and Problem Solving
2-Digit and 3-Digit Numbers

Developing
1b. Evie is wrong. The 3-digit number is correct. The 2-digit number is incorrect.
2b. Various answers, for example: My football team scored 436 goals in a year. Sadly 24 of them were disallowed. Our total was then reduced to 412 goals.
3b. No, 34 has been subtracted, not 43.

Expected
4b. Yes, the tens and ones digits in the 2-digit and 3-digit numbers have been swapped over, but not in the answer.
5b. Various answers, for example: Dad has saved up £568. He buys a coat for £45. He now has £523 left.
6b. No, 172 has been subtracted, not 72.

Greater Depth
7b. Yes, in the 2-digit number and the answer, ten of the ones could be exchanged for one ten.
8b. Various answers, for example: Mum earns £358. She spends £36. She now has only £322 left.
9b. Olivia is correct, however the subtraction of 23 ones has been conventionally partitioned into subtracting 2 tens and 3 ones.