Reasoning and Problem Solving
Step 14: Add two 3-Digit Numbers 2

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 (Problem Solving)
Developing Identify the missing digits in a 3-digit addition calculation where one exchange has taken place.
Expected Identify the missing digits in a 3-digit addition calculation where two exchanges have taken place.
Greater Depth Identify the missing digits in a 4-digit addition calculation where two or more exchanges have taken place.

Questions 2, 5 and 8 (Problem Solving)
Developing Create a 3-digit addition calculation that fits within moderate parameters.
Expected Create a 3-digit addition calculation that fits within moderately difficult parameters.
Greater Depth Create a 4-digit addition calculation that fits within more complex parameters.

Questions 3, 6 and 9 (Reasoning)
Developing Compare two 3-digit addition calculations presented in two different formats and where one exchange should have taken place. Identify which is incorrect and give an explanation for the answer.
Expected Compare two 3-digit addition calculations presented in two different formats and where two exchanges should have taken place. Identify which is incorrect and give an explanation for the answer.
Greater Depth Compare two 4-digit calculations presented in two different formats and where two or more exchanges should have taken place. Identify which is incorrect and give an explanation for the answer.

More Year 3 Addition and Subtraction resources.

Did you like this resource? Don't forget to review it on our website.

Add two 3-Digit Numbers 2

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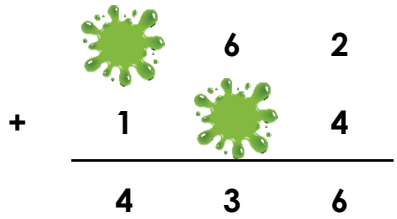
1a. Which digits are hidden under the splats?



	6	2
+	1	4
4	3	6

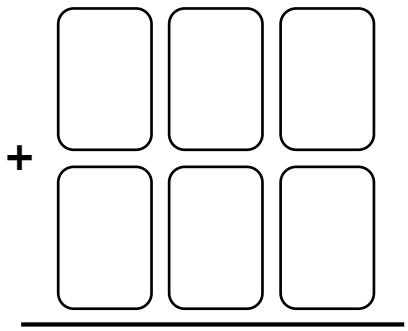
D PS

1b. Which digits are hidden under the splats?

			0
+	3	8	7
9	2	7	

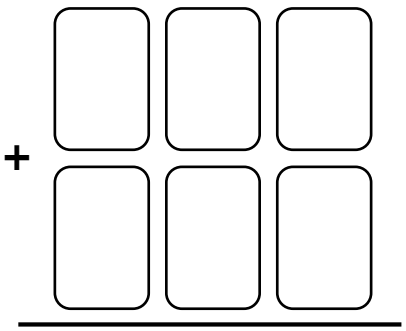
D PS

2a. Use any digit card from 0 – 9 to create a 3-digit addition calculation. Cards can be used more than once. Your answer must be over 375 and below 485. Is there only one way of reaching the same answer?



D PS

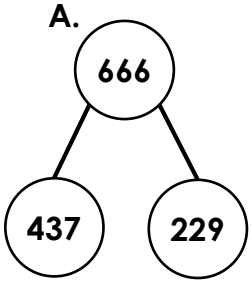
2b. Use any digit card from 0 – 9 to create a 3-digit addition calculation. Cards can be used more than once. Your answer must be over 236 and below 325. Is there only one way of reaching the same answer?



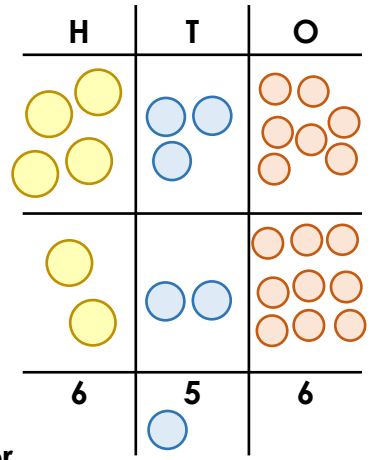
D PS

3a. Which calculation is incorrect?

A.



B.



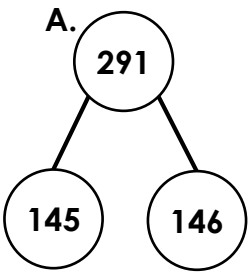
H	T	O
6	5	6

Explain your answer.

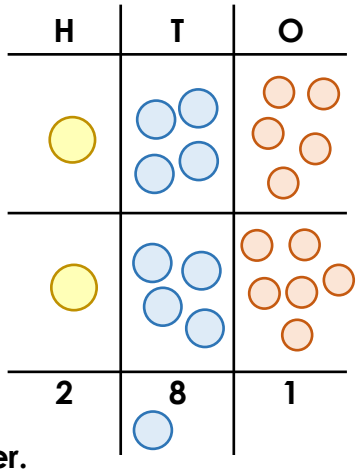
D R

3b. Which calculation is incorrect?

A.



B.



H	T	O
2	8	1

Explain your answer.

D R

Add two 3-Digit Numbers 2

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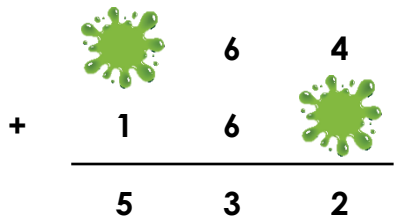
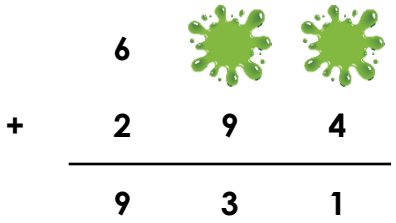
4a. Which digits are hidden under the splats?



	[splat]	6	4
+	1	6	[splat]
	5	3	2

E PS

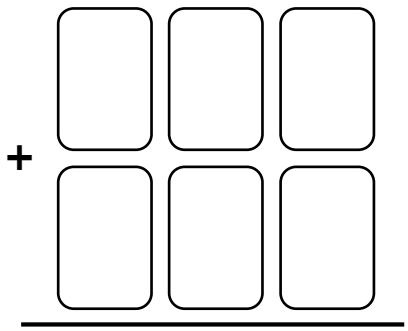
4b. Which digits are hidden under the splats?



		6	[splat] [splat]
+	2	9	4
	9	3	1

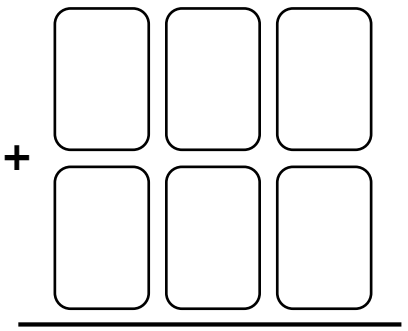
E PS

5a. Use any digit card from 0 – 9 to create a 3-digit addition calculation. Cards can only be used once for each calculation. Your answer must be over 632 and below 698. Is there only one way of reaching the same answer?



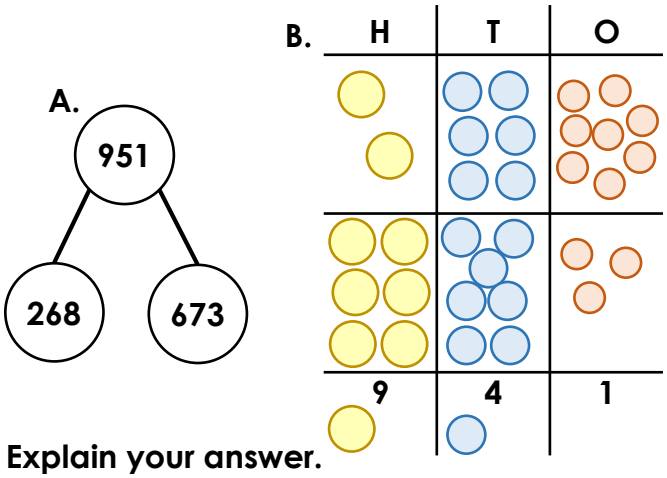
E PS

5b. Use any digit card from 0 – 9 to create a 3-digit addition calculation. Cards can only be used once for each calculation. Your answer must be over 827 and below 888. Is there only one way of reaching the same answer?



E PS

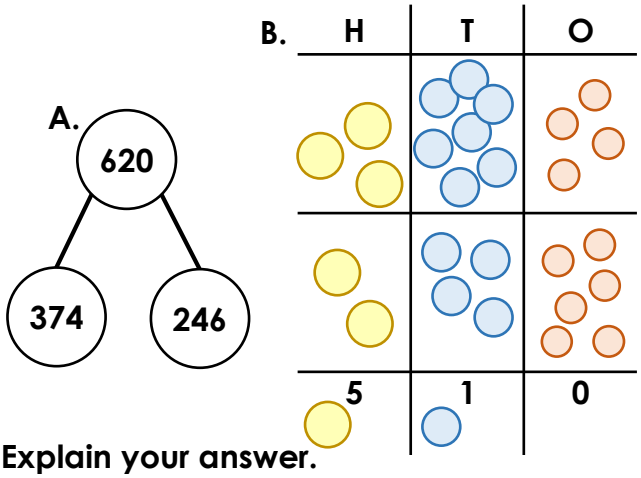
6a. Which calculation is incorrect?



Explain your answer.

E R

6b. Which calculation is incorrect?

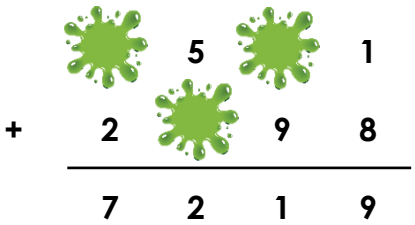


Explain your answer.

E R

Add two 3-Digit Numbers 2

7a. Which digits are hidden under the splats?

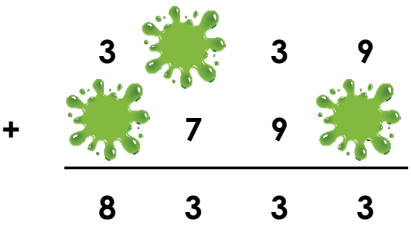


		5		1
+	2		9	8
	7	2	1	9

GD PS

Add two 3-Digit Numbers 2

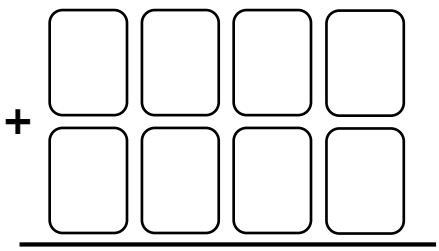
7b. Which digits are hidden under the splats?



	3		3	9
+		7	9	
	8	3	3	3

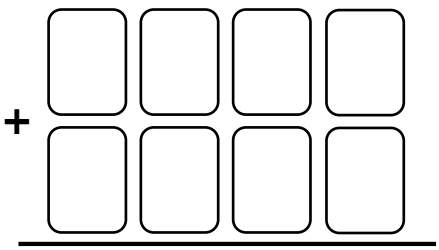
GD PS

8a. Use any digit card from 0 – 9 to create a 4-digit addition calculation. Cards can be used more than once. The calculation must include an exchange. The answer must be odd, over 1,525 and below 3,654. Is there only one way of reaching the same answer?



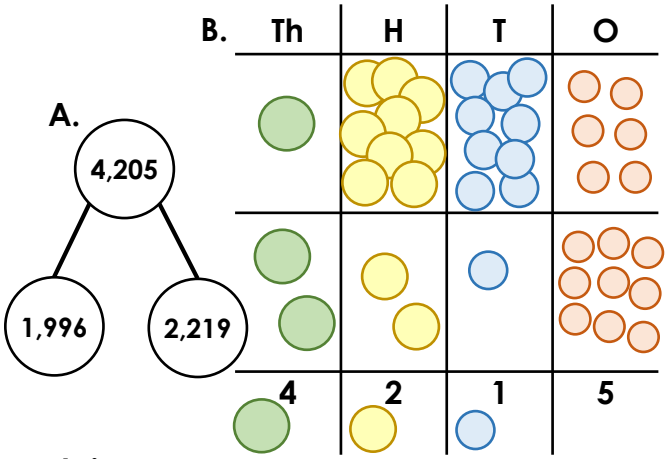
GD PS

8b. Use any digit card from 0 – 9 to create a 4-digit addition calculation. Cards can be used more than once. The calculation must include an exchnage. The answer must be even, over 2,788 and below 4,845. Is there only one way of reaching the same answer?



GD PS

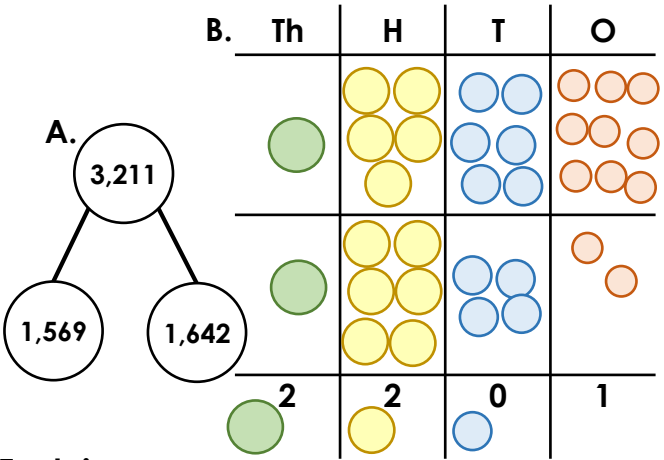
9a. Which calculation is incorrect?



Explain your answer.

GD R

9b. Which calculation is incorrect?



Explain your answer.

GD R

Reasoning and Problem Solving
Add two 3-Digit Numbers 2

Developing

1a. 2 hundreds; 7 tens

2a. Any combination of two 3-digit numbers which add together to make a number between 375 and 485 is correct.

3a. B is incorrect. The exchanged 10 hasn't been added to the tens column.

Expected

4a. 3 hundreds; 8 ones

5a. Any combination of two 3-digit numbers which add together to make a number between 632 and 698 is correct.

6a. A is incorrect. The whole should be 941.

Greater Depth

7a. 4 thousands; 6 hundreds; 2 tens

8a. Any combination of two 4-digit numbers which, when added together, involve exchanging and make an odd number between 1,525 and 3,654 is correct.

9a. A is incorrect. The whole should be 4215.

Reasoning and Problem Solving
Add two 3-Digit Numbers 2

Developing

1b. 5 hundreds; 4 tens

2b. Any combination of two 3-digit numbers which add together to make a number between 236 and 325 is correct.

3b. B is incorrect. The exchanged 10 hasn't been added to the tens column.

Expected

4b. 3 tens; 7 ones

5b. Any combination of two 3-digit numbers which add together to make a number between 827 and 888 is correct.

6b. B is incorrect. The exchanged 10 and 100 haven't been added in to the final answer.

Greater Depth

7b. 4 thousands; 5 hundreds; 4 ones

8b. Any combination of two 4-digit numbers which, when added together, involve exchanging and make an even number between 2,788 and 4,845 is correct.

9b. B is incorrect. The calculation hasn't added the exchanged ten into the tens column or the exchanged 1,000 into the thousands column.