Homework
Add Two 4-Digit Numbers – More than One Exchange

Teaching Note:

In the Expected and Greater Depth levels, 3-digit numbers have been included to ensure that children have a secure understanding of place value and have the opportunity to address any misconceptions that may arise.

National Curriculum Objectives:

Mathematics Year 4: (4C2) Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate
Mathematics Year 4: (4C3) Estimate and use inverse operations to check answers to a calculation
Mathematics Year 4: (4C4) Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why

Differentiation:

Questions 1, 4 and 7 (Varied Fluency)
Developing Identify which calculation has the fewest exchanges when adding two 4-digit numbers with up to two exchanges. Calculations presented as place value counters in a place value grid.
Expected Identify which calculation has the fewest exchanges when adding up to two 4-digit numbers with multiple exchanges. Calculations presented in column format.
Greater Depth Identify which calculation has the fewest exchanges when adding up to two 4-digit numbers with multiple exchanges. Calculations presented in a linear format with unconventional partitioning.

Questions 2, 5 and 8 (Varied Fluency)
Developing Identify whether a statement is true or false by adding two 4-digit numbers with up to two exchanges. Calculations presented as place value counters in a place value grid.
Expected Identify whether a statement is true or false by adding up to two 4-digit numbers with multiple exchanges. Calculations presented as part whole models, bar models and in a place value grid.
Greater Depth Identify whether a statement is true or false by adding up to two 4-digit numbers with multiple exchanges. Calculations presented as bar models, in a linear format and on a place value grid with unconventional partitioning.

Questions 3, 6 and 9 (Reasoning and Problem Solving)
Developing Identify and explain errors when adding two 4-digit numbers with up to two exchanges. Calculations presented as place value counters in a place value grid.
Expected Identify and explain errors when adding two 4-digit numbers with multiple exchanges. Calculations presented in column format.
Greater Depth Identify and explain errors when adding two 4-digit numbers with multiple exchanges. Calculations presented in a linear format.

Add Two 4-Digit Numbers – More than One Exchange

1. Complete each calculation to identify which one has the fewest exchanges.

A.

	Th	H	T	O
+				

B.

	Th	H	T	O
+				

D

VF
HW/Ext

2. True or false? B is the largest number. Complete each calculation to check.

A

	Th	H	T	O
+				

A

	Th	H	T	O
+				

D

VF
HW/Ext

3. Daisy knows that the total must be 4,171. She has filled in the boxes in the calculation below.

	Th	H	T	O
+				
	4	1	7	1
	1		1	

Is she correct? Prove it.

D

RPS
HW/Ext

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Add Two 4-Digit Numbers – More than One Exchange

4. Complete each calculation to identify which one has the fewest exchanges.

A.

	4	8	6	1
+	3	1	3	9

B.

	7	5	8	2
+	1	6	2	7

C.

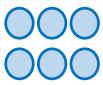
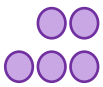
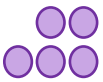
	5	2	0	8
+	3	7	9	2

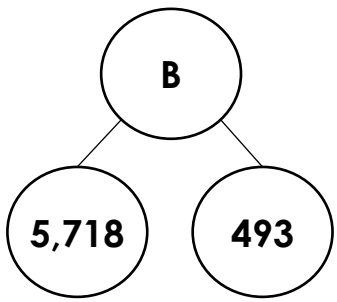
E

VF
HW/Ext

5. True or false? C is the largest number. Complete each calculation to check.

A

	Th	H	T	O
				
+				



C	
2,360	4,857

E

VF
HW/Ext

6. Arthur knows that the total must be 6,422. He has filled in the boxes in the calculation below.

	3	7	5	4
+	3	7	7	8
	6	4	2	2
	1	1	1	

Is he correct? Prove it.

E

RPS
HW/Ext

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Add Two 4-Digit Numbers – More than One Exchange

7. Complete each calculation to identify which one has the fewest exchanges.

A. 6,590 + 2,725 = ☐

B. 6 thousands, 9 hundreds, 3 tens and 2 ones + 2,089 = ☐

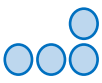
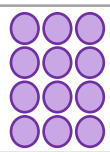
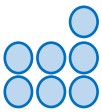
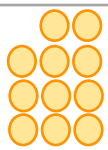
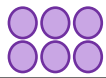
C. 8 thousands, 6 hundreds and 38 ones + 796 = ☐

GD

VF
HW/Ext

8. True or false? C is the largest number. Complete each calculation to check.

A

	Th	H	T	O
				
+				

B	
1,688	932

C 4,829 + 2 thousands, 12 hundreds, 9 tens and 3 ones

GD

VF
HW/Ext

9. Oskar knows that the total must be 8,062. He has filled in the boxes in the calculation below.

5,	9	9	3	+	3,	1	7	9	=	8,	0	6	2

Is he correct? Prove it.

GD

RPS
HW/Ext

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Homework
Add Two 4-Digit Numbers – More than One Exchange

Developing

1.

A.

	Th	H	T	O
				
+				
	4	0	6	0
	1		1	

B.

	Th	H	T	O
				
+				
	9	8	1	9
		1		

B has the fewest exchanges.

2. False. A = 8,115 and B = 7,810

3. Daisy is incorrect. She has not exchanged the 10 and 1,000 correctly. The numbers should be: 2,546 + 1,625 = 4,171

Expected

4. A.

	4	8	6	1
+	3	1	3	9
	8	0	0	0
	1	1	1	

B.

	7	5	8	2
+	1	6	2	7
	9	2	0	9
	1	1		

C.

	5	2	0	8
+	3	7	9	2
	9	0	0	0
	1	1	1	

B has the fewest exchanges.

5. True. A = 4,100, B = 6,211 and C = 7,217

6. Arthur is incorrect. He has not exchanged the 10, 100 and 1,000 correctly. The numbers should be: 3,654 + 2,768 = 6,422

Greater Depth

7. A has the fewest exchanges.

A. 6,590 + 2,725 = 9,315

B. 6,932 + 2,089 = 9,021

C. 8,638 + 796 = 9,434

8. False. A = 9,278, B = 2,620 and C = 8,122

9. Oskar is incorrect. He has not exchanged the 10, 100 and 1,000 correctly. The numbers should be: 4,983 + 3,079 = 8,062

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