## Homework/Extension Step 4: Add Two 4-Digit Numbers 3

## 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:


#### Abstract

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.

More Year 4 Addition and Subtraction resources.
Did you like this resource? Don't forget to review it on our website.

## Add Two 4－Digit Numbers 3

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

| Th | H | T | O |
| :---: | :---: | :---: | :---: |
| 00 | 00 |  | 000 |
| 00 | 000 | 00 | 000 |
| 0 | 00 |  | 0 |
|  | 000 | 000 | 000 |
|  |  |  |  |

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


| th | H | T | O |  |
| :--- | :---: | :---: | :---: | :---: |
|  | +000 | 000 | 000 | 000 |
| 0000 |  |  |  |  |
| 000 | 000 | 000 | 000 |  |
|  |  |  |  |  |

## 吅

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


Is she correct？Prove it．

## Add Two 4-Digit Numbers 3

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 |
|  |  |  |  |  |
|  |  |  |  |  |

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


| $C$ |  |
| :---: | :---: |
| 2,360 | 4,857 |

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.
classroomsecrets.co.uk

## Add Two 4-Digit Numbers 3

7. Complete each calculation to identify which one has the fewest exchanges.
A. $6,590+2,725=\square$
B. 6 thousands, 9 hundreds, 3 tens and 2 ones $+2,089=$ $\square$
C. 8 thousands, 6 hundreds and 38 ones $+796=$ $\square$
8. True or false? C is the largest number. Complete each calculation to check.


| B |  |
| :---: | :---: |
| 1,688 | 932 |

C 4,829 + 2 thousands, 12 hundreds, 9 tens and 3 ones
9. Oskar knows that the total must be 8,062. He has filled in the boxes in the calculation below.

$$
5,93+3,179=8,062
$$

Is he correct? Prove it.

## Homework/Extension

## Add Two 4-Digit Numbers 3

## Developing

| 1. | Th | H | T | 0 |
| :---: | :---: | :---: | :---: | :---: |
| A. | 00 | $\begin{array}{r} 00 \\ 000 \end{array}$ | $\bigcirc \bigcirc$ | $\begin{aligned} & 000 \\ & 000 \end{aligned}$ |
| + | $\bigcirc$ | $\begin{array}{r} 00 \\ 000 \end{array}$ | OOO | $\begin{array}{r} 0 \\ 000 \end{array}$ |
|  | 4 | 0 | 6 | 0 |

B.

| Th | H | T | O |
| :---: | :---: | :---: | :---: |
| $\bigcirc \bigcirc \bigcirc$ |  | $\bigcirc \bigcirc$ | $\bigcirc$ |
| $\bigcirc \bigcirc \bigcirc$ | $\bigcirc 0 \bigcirc$ | $\bigcirc \bigcirc \bigcirc$ | $\bigcirc \bigcirc \bigcirc$ |
| $\bigcirc \bigcirc \bigcirc$ | $\bigcirc \bigcirc$ | $\bigcirc \bigcirc \bigcirc$ | $\bigcirc \bigcirc$ |
| $\mathbf{9}$ | $\mathbf{8}$ | $\mathbf{1}$ | $\mathbf{9}$ |

$B$ 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
